

★ Minicam **Photography**

MAY, 25c

•
DAY IN
THE LIFE OF
AN AMATEUR
PHOTOGRAPHER

•
NO-TRAY PRINT
DEVELOPMENT

•
TAKE YOUR
CAMERA TO
THE ZOO

•
CENTRICITIES
OF GREAT
PHOTOGRAPHERS
BY
ALEXANDER KING

•
HOW TO PAINT
WITH LIGHT

•
CAMERA ON
THE DESERT



HOW TO USE FLASH FOR COLOR PHOTOGRAPHY



BASEBALL, golf, tennis and other events are irresistible enough these days. But when a camera is handy, nothing compares with a combination of water, sand and a beautiful figure on the beach. This late-afternoon picture was taken with a shutter speed of $1/200$ of a second, just fast enough to stop the action. The lens was at $f3.5$, and focused on the figure, which was about 15 feet from the

camera. Agfa Finopan film was used and a red filter. Using the lens at its widest aperture kept the background of sea and sky out of focus, to concentrate attention on the running figure. The leg caught above ground in a slightly awkward, but realistic motion gives the picture a "photographic" quality not to be found in pretty-pretty paintings. "Silhouette" by Andre de Dienes.

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© Derrick 1939

American Beauty

TO capture, in pictures, the grandeur that is America . . . crack photographers depend on Agfa Films. One of these films is Agfa *Finopan*. Made expressly for the smaller picture sizes . . .

. . . the extremely fine grain of this film permits extraordinary enlargements, without "graininess" in the finished prints.

Yet there is no sacrifice in *Finopan* of color sensitivity . . . no sacrifice of brilliant gradation characteristics, nor of latitude.

And it is fast enough to cover a wide range of your picture taking.

Ask your dealer for *Finopan* today. **Agfa Ansco, Binghamton, New York.**

Agfa

FINOPAN FILM

MADE IN U. S. A.



FOR EVERY-
ONE TAKING
PICTURES

Minicam Photography

MINIATURE
CAMERA
MONTHLY

EDITED BY WILL LANE, A. R. P. S.

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IN FOCUS



LETTERS to this department may be addressed to "In Focus" Department, MINICAM Magazine, 22 East Twelfth Street, Cincinnati, Ohio.

No War, No "Jumps"

Sirs:

As an enthusiastic and cover-to-cover reader, permit me to:

1. HOPE MINICAM will devote the very minimum of space to war and war photography.
2. CASTIGATE MINICAM for forcing us to refer to "page 97, please," in order to finish reading six articles in last month's issue.
3. PRAISE MINICAM for letting us read through seven articles without encountering a reference to "page 97, please," in order to continue the subject matter in hand.

DONALD W. JOHNSON, M. D.

Fairmont, Minn.

Camera Scratches


Sirs:

Attention—Camera Manufacturers.

Don't you think it's about time some means were provided to withdraw the pressure plate when film is in motion? It certainly would not require much ingenuity to design a mechanism to release

(Page 6, please)

MINICAM PHOTOGRAPHY [TITLE REG. U. S. PAT. OFF.], PUBLISHED AT 22 E. 12TH ST., CINCINNATI, O. EDITOR: WILL LANE, A. R. P. S. BUSINESS MANAGER, A. M. MATHIEU. EDITORIAL ASSOCIATES: HENRY CLAY GIPSON, HENRY HOLMES SMITH. CONTRIBUTING EDITORS: JOHN HUTCHINS, A. R. P. S.; JACK POWELL, J. GHISLAIN LOOTENS, F. R. P. S.; ALEXANDER KING, VICTOR H. WASSON. ART DIRECTOR: BOB WOOD. PUBLISHED MONTHLY BY THE AUTOMOBILE DIGEST PUBLISHING CORP. YEARLY SUBSCRIPTION, \$2.50 IN U.S.A. AND POSSESSIONS, CANADA AND COUNTRIES IN PAN-AMERICAN POSTAL UNION, \$3.00; ELSEWHERE, \$3.50. SINGLE COPIES, 25c. EASTERN ADVERTISING OFFICE: EVERETT BELLET, 42 WEST 45TH STREET, NEW YORK CITY, TELEPHONE VA. 6-3354. MID-WEST ADVERTISING OFFICE: BERNARD A. ROSENTHAL, 333 NORTH MICHIGAN AVE., CHICAGO, ILL. TELEPHONE FRANKLIN 7100. WEST COAST OFFICE: A. ROTHENBERG, 3275 WILSHIRE BLVD., LOS ANGELES, CALIF. TELEPHONE, FEDERAL 9399. ENTERED AS SECOND CLASS MATTER AT CINCINNATI, O. MARCH 21, 1938, UNDER THE ACT OF MARCH 3, 1879. PRINTED IN U. S. A.



This unusual table-top photograph was made with the always dependable Argoflex, using projected background and model plane.

F:4.5 lens, shutter 1/10 to 1/200, T & B, 2 1/4 x 2 1/4 pictures on standard 120 or 620 film, Price \$35.00. Saddle leather carrying case \$5.00.

You can see what you see . . .

This Argoflex camera shows you just what you're going to get when you shoot in its brilliant reflex finder. And you don't need luck to get 12 clear, sharp album-size prints—easy to make yourself—or inexpensive to buy. Your Argus Dealer will be glad to show you this fine American-made camera.

argus = **ann arbor**
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GLASS BEADED SCREENS

Now, you can have your first choice in screen surfaces—*Da-Lite's famous specially processed glass-beaded surface* that reflects more light and makes all pictures brighter and clearer—for less than you had expected to pay. Here is the good news for all those intending to buy a hanging screen—all sizes of the Da-Lite Model B Screen (shown above) have been reduced in price.

A FEW TYPICAL MODEL B VALUES

22" x 30"—New Reduced Price.....	\$ 6.00*
30" x 40"—New Reduced Price.....	7.50*
39" x 52"—New Reduced Price.....	11.50*
40" x 40"—New Reduced Price.....	9.00*
60" x 60"—New Reduced Price.....	20.00*

Eight other Model B sizes are also available at new low prices.

For those who want a portable tripod screen, 7 sizes of the famous Challenger may now be purchased at new low prices. *Da-Lite today is more than ever your best buy.* Ask your dealer about Da-Lite's new low prices. Write for new literature now! Sizes for every need, from \$2.00* up.

*Prices slightly higher on Pacific Coast.

DA-LITE SCREEN CO., Inc.
Dept. 5M, 2723 No. Crawford Ave., Chicago, Ill.

the pressure plate when film is being moved and to apply *strong* pressure when film is at rest. Motion picture cameras employ this principle and the action takes place 24 times per second.

To my mind—the flat pressure plate is the weakest point in present miniature camera design. Film is easily scratched and the area directly back of the image should never rub on metal—no matter how highly polished.

I have owned six high-priced miniatures and all were potential film scratchers.

Of course, to the average "snap shot" artist, a few scratches more or less are of small moment but for the serious worker and news photographer, scratches and abrasion marks are an infernal nuisance.

In all fairness it must be said that cameras are not the only offenders. Some of the developing reels on the market are capable of ruining film. I refer to those that load from the "outside—in," i. e., the film is forced in the spiral grooves.

After scratching several important rolls of film while using one of the reels just described, I finally overcame the trouble with a hacksaw and fine-toothed file.

The foregoing remarks are offered as constructive criticism and it is hoped that manufacturers eventually will furnish equipment that will keep scratching down to a minimum.

DON CANADY.

Canady Sound Appliance Co.,

Cleveland, O.

Camera of the Future?

I think the minicam field is ready for a new type of camera. It would have a focal plane shutter with speeds from 1/1000 second or faster. In general construction it would be much like many made today, such as the Perflex, but it would make single frame negatives on 16mm. cine film, which would be loaded in magazines of the same type as the regular 35mm. minicam film. It would use regular 16mm. cine lenses.

The first thought is, of course, that 16mm. frames are too small to give good prints. I don't think so, however; many 16mm. movie filmers get good enlargements from their films despite the slow shutter speed of cine cameras.

There are many points in favor of such a camera; first, many thousands of movie filmers have already bought expensive lenses and these could thus be made to serve a double purpose. These lenses are, as a rule, faster than still lenses, the most modest cine cameras have f3.5 or f2.7 lenses, f1.9 to f1.5 is average and some are f1.4, f1.3 or f0.99. The short focal length gives enough depth to do away with the need of a range finder.



*It's actually
come true!*
**SURE-FIRE SYNCHRONIZATION
AT DOWN-TO-EARTH COST!**

● Self-contained unit with switch adjustably mounted on the battery case; may be 'moved up or down.

● Foolproof synchronization at top shutter speeds for Eastman, Ilex, Compur, Compound, Argus, Wollensak, Standard Rolleicord, Argoflex, Rolleiflex and most other focal plane shutters.

● The micrometer adjustment on the cable can be adjusted to 2000ths of an inch.

● Specially designed all metal cable, perfectly smooth, extremely

flexible, non-stretching. No corrosion to slow up the action.

● Exclusive "spider-web" socket with push-pull feature; no burned fingers; conical spring contact.

● Exclusive retracting plunger permits setting of shutter at will; no soldered connections; indestructible wiping contacts.

● 5½-inch brass chrome plated, adjustable aplanatic reflector; powered with two No. 935 Eveready batteries.

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SILVER CONTACT POINT
SYNCHRONIZER

\$13.95 COMPLETE



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See your dealer, or order direct. When ordering, state model of camera and shutter.

**METEOR FLASH
MODEL "ONE"**

With synchronizer, tip "A", torch, batteries, 5½-inch reflector, 14-inch cable, Flash Calculator and instructions.

**\$9.95
COMPLETE**



NOTE! If you already own a METEOR-FLASH MODEL "ONE", you can easily convert it to the Model "Two" simply by purchasing the Synchronizer Clamp, Adjustable All Metal Cable Release and the Finger Release Button. **ALL FOR \$4.00**

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● 5½-inch brass chrome plated, adjustable aplanatic reflector; powered with two No. 935 Eveready batteries.

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155 East 44th Street New York, N. Y.

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Frank A. Emmet Co.,
2707 W. Pico St., Los Angeles, Calif.

Second; there is a good selection of 16mm. negative film available; I know of the following: Eastman, Super-XX, and Infra-red; Agfa, Superpan Supreme and Finopan; Du Pont, Superior Pan. Also, Dufaycolor and a great variety of positive and similar types of colorblind films. If one reloaded his magazines film would cost about 1/10th cent per exposure.

Such a camera should not cost over \$30.00 without lens. Fotoshop sells the Minox camera, which uses 9½mm. film, for \$79.00 with an f3.5 lens. What do you think of the whole idea? I sure would like to get such a camera. Mackinaw City, Mich. MARTIN ALGER.

MINICAM would enjoy hearing from other readers and their ideas of what the ideal camera would be like.—Ed.

No. 123 Plate-Back Wanted

Sirs:

Some time ago an old gentleman gave me an old No. 4 folding Hawk-Eye model 3. This camera must be at least thirty-five years old and still takes swell pictures. It uses No. 123 Eastman roll film and this can only be obtained in Verichrome. At times, this size is hard to get.

I have been told that a plate back was made for this camera and I wrote to the Eastman Co. They could not help me, saying that my only

chance was to find another person who has an old camera like mine. If at all possible, I would like to hear from someone with a plate back to fit my camera.

R. A. NEFF.
1380 Webb Rd., Lakewood, Ohio

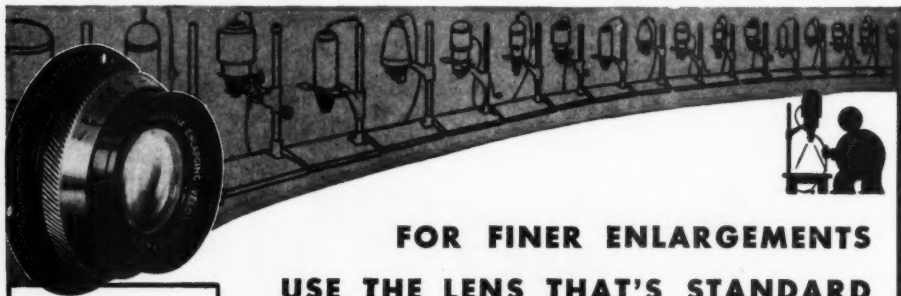
Photo Checkerboard



Sirs:

Here is a personal photo checker game made from an ordinary snapshot.

The picture was made 32 times, cut and pasted up on a sheet of black paper, then



WOLLENSAK 2" f4.5
ENLARGING
VELOSTIGMAT \$12.50

USE THE LENS THAT'S STANDARD EQUIPMENT ON LEADING ENLARGERS

SOLAR—ELWOOD—SUNRAY—SKYVIEW—

here's just a partial list of prominent manufacturers who regularly specify Wollensak Enlarging Velostigmats. They know they can depend on optically refined Velostigmats for top-notch performance—sparkling detail, brilliancy, gradation.

Why don't you equip your enlarger with a Velostigmat? This enlarging lens is especially designed to overcome enlarging difficulties—make superb blow-ups easier to obtain. Speeds—f3.5, f4.5, f6.3. Focal lengths—2" up. Priced from \$10. Money-back Guarantee.

WOLLENSAK OPTICAL COMPANY, 624 Hudson Ave., Rochester, N. Y.



WOLLENSAK

WRITE FOR
FREE BOOK

copied and a print made and mounted on cardboard. Coins can be used for checkers. The idea is very interesting, especially when made up and sent as a surprise to a friend.

MURRAY GREENE,

New York City.

Building the Enlarger

Sirs:

I was all steamed up to build your Precision-Type Enlarger until I was informed that all aluminum is being used for defense work. I like the plans and would like to build the enlarger. Could you offer a substitute metal to use? Also explain how the counter balance works. And how about some blueprints?

J. T. RABUN.

Birmingham, Alabama.

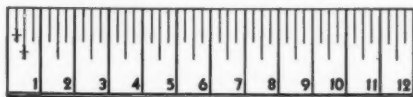
BRASS is a good substitute for aluminum in building this enlarger. The brass lamphouse and carriage will cost more, however, being about three times as heavy. There will also be more work when using brass, as it does not come in all the extruded shapes that are supplied in aluminum.

A great advantage in using brass is that it can be soldered. This eliminates a lot of drilling, threading and bolting. Use a small gas or alcohol blow torch and good soldering materials. Tin both surfaces first, then clamp them together and apply the torch flame directly to the joint.

The counterbalance specified consists of a steel tape on a spring tension that exerts a pull equal to the weight of the lamphouse and carriage. This balances the weight of the moving part of the enlarger to facilitate raising and lowering. When purchasing a counterbalance, specify the total weight of the moving part.

In lieu of a blueprint, the drawing (MINI-CAM, Feb., page 72) may be used. The scale is 5 inches to the inch.

The small ruler below is marked off in quarter inches. To obtain dimensions from the drawing, either use this as a ruler or draw one to the same scale. It will show the diameter of the lamphouse to be 5 inches, condenser diameter $3\frac{1}{2}$ inches, etc.—Ed.



INCHES

Sirs:

In constructing the Precision-Type Enlarger described in the February MINICAM, I cut the costs by using a coffee percolator (89c at Kresge's) for the lamphouse.

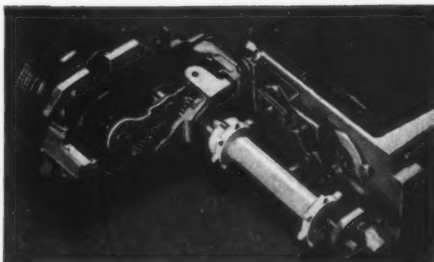
The percolator is 5 inches in diameter and 7 inches high, just the size of aluminum tubing needed. I put the ventilating tubings right over the spout.

AL. BOUTE.

Somerville, Mass.



The INSIDE STORY



Just look at what goes on inside a Contax, and you'll see that here, indeed, is a genuine masterpiece of mechanical ingenuity—a highly refined, precision mechanism that operates with extraordinary accuracy. It assures easy operation, perfect control and utmost dependability.

Part of this assembly is a metal focal-plane shutter unsurpassed in accuracy and reliability. Made of tough metal strips, ingeniously interlocked, this shutter possesses the *flexibility* of cloth plus the *strength and durability* of metal. Tested in arctic cold and humid tropic heat, the Contax shutter has proved its absolute dependability.

Think of what goes on *inside*, and you'll choose a Contax.

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728 So. Hill St., Los Angeles



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Ciro-Flex



**The First
All-American
All-Metal Twin
Reflex Camera**

\$42.50

Eveready Case \$6.00

(SEE COUPON BELOW)

It's easy to make perfect pictures with a **Ciro-Flex** because you just can't take out-of-focus pictures with it. What you SEE in the ground glass is exactly what you GET in the finished picture. The famous Wollensak 83mm F3.5 Velostigmat color corrected lens is synchronized with the F3.2 viewing lens, and is focused instantly by the large side knob. You see the picture full size and brilliantly defined. The shutter is absolutely dependable and offers speeds from 1/10 to 1/200 part of a second. Uses either Eastman 120 or Agfa 82 film with 12 exposures to the roll. Each 2 1/4 x 2 1/4.

Mail Orders Filled Promptly
Write Dept. M. C. I. for Booklet

FILL IN THE COUPON BELOW

and we'll let you know immediately the full trade in price we will allow on your old camera toward the purchase of a **CIRO-FLEX**.

Willoughbys

32nd St. near 6th Ave., N. Y.

Gentlemen: Please let me know the amount you will allow me toward the purchase of a **Ciro-Flex** on my old camera.

Name of Camera
Lens and Shutter
Condition Model Year
Name
Address

**World's Largest Camera Store
Built on Square Dealing**

Flash Test

Sirs:

I recently purchased a flash synchronizer and checked its performance by the data given in **MINICAM**, April (page 67). While the idea is perfect mechanically, I have a few additional items that should be mentioned.

First, as an economic measure one can use enlarging paper instead of film and it is much easier to develop. I made the test with a 35 mm. camera. At 1/500 second, I used f16 without any kind of filter and at 1/250 second, f16 with a K2 filter. Do not use a red filter as with film. Develop the paper in D-72 in the regular manner and of course the image will be in reverse but will serve the purpose.

In testing a between-the-lens (Compur) shutter, be sure to allow for the angle at which the picture is taken so a perfect picture is taken of the bulb in the reflector. This is where I went wrong and burnt up a number of flash bulbs before finding out that my shutter was perfectly synchronized but I was only photographing a part of the bulb's reflection in the reflector. By getting only part of the bulb's reflection it appears that the shutter is not synchronized. I found it necessary to remove the flash gun from the camera and hold it at an angle so the reflection of the whole bulb would be visible in the view finder, and then the results were perfect.

In closing I want to say that I think **MINICAM** is one of the finest of its kind and I have derived much useful information from it.

WALTER C. GASEL.

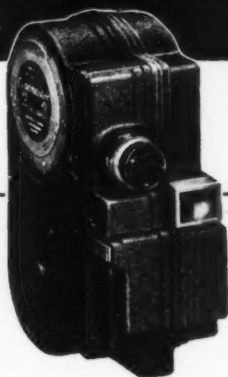
Inspector American Airlines Radio,
Flushing, N. Y.



"Do you think he should have asked the sergeant before swapping?"

You can take it!

... and in Color



ONLY \$27⁵⁰

with Wollensak f 3.5 Lens

other models \$15.95 and \$19.95

NO OTHER CAMERA

at any price offers all these features

Combined Exposure Meter and Optical View Finder... Minimized Parallax... Three Speeds... Exposure Calculator... Continuous Running... Interchangeable f 2.7, f 1.9 and Telephoto Lenses... Quick Easy Loading... Footage Counter... Special Take-Up Sprocket... Improved Governor... New Powerful Spring Motor... Focal Plane Shutter... Takes All Makes of Color or Black and White Film, including the Economy Univex Straight 8.

WITH

Cinémaster Dual 8 MM

NO MATTER what your experience may have been taking quick-action and color movies—don't be discouraged into believing that true success demands either expert skill or costly equipment.

For now comes the *Cinémaster*—built by one of America's outstanding precision manufacturers—to give you the thrill of making “professional” movies—in color—at prices to fit your pocket.

Engineered into the *Cinémaster* are the three most needed essentials of successful color photography, a *dependable* exposure meter, *accurate* shutter speeds, and *correct* exposure over the entire picture area.

Plussing these, *Cinémaster* provides a host of such other fine-camera features as you'd expect to find only in instruments of far greater price.

Compactly built and trimly shaped, the *Cinémaster* E-8 handles with utmost ease. Smartly styled and finished in antique bronze, it is a camera you'll be proud to be seen with. Examine it today! Many dealers offer extended payment terms—which makes your *Cinémaster* even easier to own!

UNIVERSAL CAMERA CORPORATION

NEW YORK

CHICAGO

HOLLYWOOD



A BLACK leopard's furious snarl is accentuated by EYES of mother and infant grow round with fright
the weird reflection of a flash bulb in his eyes. as the black beast's thunder rolls through the hall.

PHOTOGRAPHS FROM THE ZOOLOGICAL SOCIETY OF PHILADELPHIA

● A DAY AT



THE ZOO

BY MARK MOONEY, JR. — STAFF PHOTOGRAPHER

PHILADELPHIA ZOOLOGICAL GARDEN



SEA LIONS, with sleek, gleaming coats play in the water and on the rocks. Side lighting emphasizes the roundness of their heads and plump

bodies, and the texture of their skin. A rough-textured background for these animals contrasts with their shining fur. By Oscar Doyle Johnson.



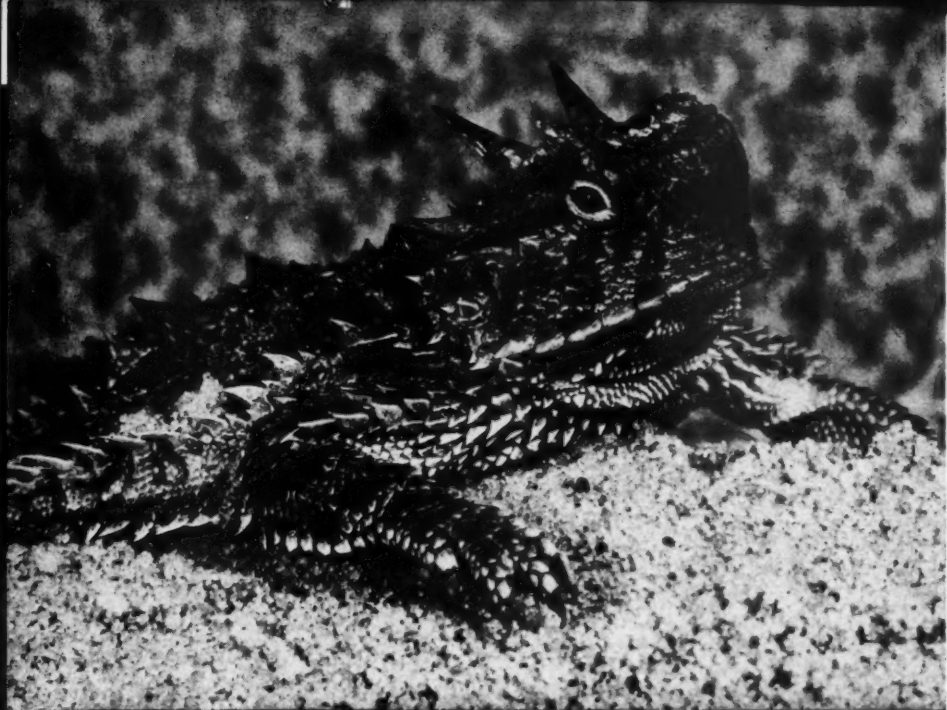
TIGERS are not always ferocious. Study the animals to discover their particular characteristics. Choose a camera angle and type of lighting that will bring out these characteristics in the picture.



THE KEEPERS know which animals they can trust and which they cannot. Remember to contact a keeper before making a picture.



A fast-moving and cunning animal, the gorilla is dangerous.



A HORNED toad, a mere three inches long, resembles some prehistoric monster when the camera gets down to his level. This "top-of-the-table" shot is typical of the possibilities at the zoo, when the camera is at the eye-level of small animals, snakes, and birds. An inverted glass aquarium

makes an excellent improvised "cage" with which small, lively animals may be kept within camera range. Photograph them through the glass. Reptiles and similar cold-blooded creatures become docile models after being placed in a refrigerator for a short while.



WHAT "cat" wouldn't be curious when a human being with a black box in front of his face lies down on the floor? Low angles are useful in getting expressions. A sudden movement, however, may spell danger to an animal mind and result in disaster to the cameraman who is concentrating on his picture.



HEAR no evil, speak no evil, see no evil—but it's all right to peek a bit. A pose such as this is the result of patience and cooperation on the part of the keeper. Men who know the daily habits of their charges, can furnish a great deal of information that will help the animal photographer. Although busy, they take pride in discussing their wild creatures, and they will appreciate receiving prints of the animals that are their wards.

FOR A BIG GAME hunt all your own, take your camera on a visit to the local zoo. Animal photography, like press photography, goes for high speed, accurate shooting and quick thinking. That's what makes it fun for any lensman who likes to put his equipment and technique through their paces.

On your very first trip through the zoo you may not even need your camera. The main thing is to watch the animals. Take it easy; study them for traits or mannerisms that appeal to you. Pick out your favorites, and look for simple backgrounds among their surroundings.

The amusing antics in the monkey cage may catch your eye; or perhaps a soulful, furry mother monkey with her tiny wizened infant that appears to be nothing but skin and bones. The snarling fury of a black leopard, the ferocious glare of a gorilla, the deceptive gentleness of a tiger or some other "cat," the clown-like clumsiness of the bears — when one of these strikes your fancy, that's the subject for your camera.

If portraits appeal to you, plan close-ups of the heads of your favorite animals. Animal faces cover a range of emotions almost as long and subtle as found among human beings. For poetry of motion, show the animal's entire body in action. In any case, the following three cardinal principles apply to all who take pictures in the zoo:

- (1) Be careful of yourself. Take no risks.
- (2) Be careful of the animal. Animals can be frightened into dangerous action.
- (3) Have a keeper or guard accompany you, if you wish to cross a guard rail.

● **AS IN MOST** fields, no one camera answers all the problems of zoo photography. For most outdoor shots a twin-lens reflex or miniature with coupled rangefinder, loaded with fast panchromatic film, is a nearly perfect outfit. A flash synchronizer is useful outdoors to eliminate heavy shadows and to drive light into the coats of dark, heavily-furred animals to bring out texture.

The reflex type of camera enables you

to keep your subject in focus and your eye on the animal at the same time. This latter is very necessary, especially if you are in a spot where the animal may reach you. Many zoo specimens are just as wild as their free relatives and they can move with astonishing speed when they wish. The safest attitude to adopt is to fear no animal but to respect them all. It is foolhardy to do otherwise and it doesn't pay to trust any of them too far, no matter how tame and gentle they may seem.

Cameras other than the two types mentioned will work well, if the following technique is used: Study the path the moving animal takes in his restless striding. Select a point on that path and focus the camera on it. Wait until the animal reaches that spot and snap the shutter. When dim light forces the use of a slow shutter speed take the picture as the animal changes direction or comes toward the camera. As he turns, the action is slowed down, but the impression of movement and play of muscles beneath the skin is not lost.

● **NO MATTER WHAT** type of camera you use, learn its operation so well that getting ready for a shot becomes semi-automatic. Be able to wind the film and cock the shutter with hardly a glance at the camera. Animal expressions and positions change rapidly. If you take too much time for camera adjustments the pose you wanted is gone.

A bright, cloudy day is often better than a sunny one if the cage has overhead bars. Unless a pattern picture is desired, all shadows should be transparent and full of detail, not dead black. Animals that match the background color closely are best photographed with side or back lighting. Side lighting will also give your prints a three-dimensional effect.

Filters are useful in rendering the texture in the feathers of the lighter colored birds or in the fur of such animals as white polar bears. The necessary increase in exposure, however, often offsets the advantage of using them. Modern pan-

(Page 92, please)

ARE GREAT PHOTOG-

THE FREAKISHNESS OF GENIUS WITH PHOTOGRAPHS

OF STIEBLITZ, STEICHEN, GENTHE AND MILI

I'VE always had a great weakness for freaks. Eccentricity of attire, or general appearance indicates an original mind. Not always, of course. However it has been my experience that freaks try to be original even if they don't always succeed.

Since even such an attempt is a commendable thing—particularly in photography, where machine-like similarity is a prime condition of work, I have a soft spot in my heart for any photographer who wears large checked coats and whose hair is at least five inches long. If in addition to this he wears octagonal, shell-rimmed glasses and suede shoes with fringed tongues that flap on the outside, he can be sure of a hearty welcome from me.

I learned about freaks a long time ago. I was going to throw a party and asked that fantastically astute hostess Miss Muriel Draper to assist me in mailing my invitations to the proper people. She looked carefully at my tentative list and finally focusing her penetrating, bird-like eyes upon me said, "Where are the freaks?" I was young then and not overly bright so I ignored her warning and had about the dulllest party that has been held since Coolidge's inauguration.

I know that many people dislike the trappings of Bohemianism because they are frequently accompanied by a loud mouth and nothing much besides. On the other hand if you look at the famous men of history you will discover with amazement how few of them look just like folks. Most of the great photographers beginning with Daguerre, Atget and Nadar, Hill, Brady and the rest of the early boys, have a tendency to look like circus performers and don't think this is due entirely

to the quaint costumes worn during the late Victorian reign.

I advise you to look at the respectable people of that same period, the Prince consort for example, and you will discover that one could look enormously stuffy although one's hair was combed into "*aggerawaters*" and the side whiskers hung down to dim dreary lengths near the lower waistcoat pockets.

As a matter of fact if you look at the modern photographers who amount to anything they look like refugees from a Greenwich Village studio. Most of them are. Let me admonish you again that your work will not improve one bit because you grow sideburns down to your jaw bones, or wear an over-plaid that will blind provincial horses in your neighborhood. I hope I have made myself plain when I say that the eccentricity ought to be the outcome of some streak in your nature which tends toward protest against the drabness of our environment.

The affectation of strange clothing among practitioners of the arts is a very ancient one. In the beginning it probably came from poverty, later it became a professional trade mark, and later still probably an affectation which paid off in cash.

A distinguished lady who went to have her portrait painted around the year 1880 would have considered herself wronged if the artist had not received her wearing a velvet jacket and tremendous beret. That he should be properly bewhiskered and covered with ostentatious jewelry was an obligatory concomitant of his calling.

Amusingly enough, the eccentricities of one generation become the commonplaces of the next. When I was young, the girls of Greenwich Village and only the girls of Greenwich Village went stockingless, wore smocks, and reinvented sandals. Slacks

RAPHERS ECCENTRIC?

BY ALEXANDER KING



GJON MILI, one of the ace cameramen on LIFE'S staff specializes in high speed shots of dancers, fighting goldfish, bullets in flight, and Madison Square Garden athletes—all shot with stroboscopic lights at speeds around 1/100,000 of a second. A Bohemian of the first water, he lives and works

on the outskirts of New York's Greenwich Village. Here he is seen as photographed by Alex King, the author of this article, at 1/100,000 of a second while Mili was posing Marjorie Belcher for a dance picture. The maestro likes to do a little dance with each of his clients to get himself into the mood.



CONVIVIAL Arnold Genthe, famed for his portraits and studies of the dance, has in the past decade turned his skilled eyes more and more to color photography.



were worn only South of 14th Street, until the year 1925. Nowadays when men are wearing lavender evening clothes, jeweled gardenias, and when kilts have become *de rigueur* on every penthouse terrace, it is not so easy to strike an original note.

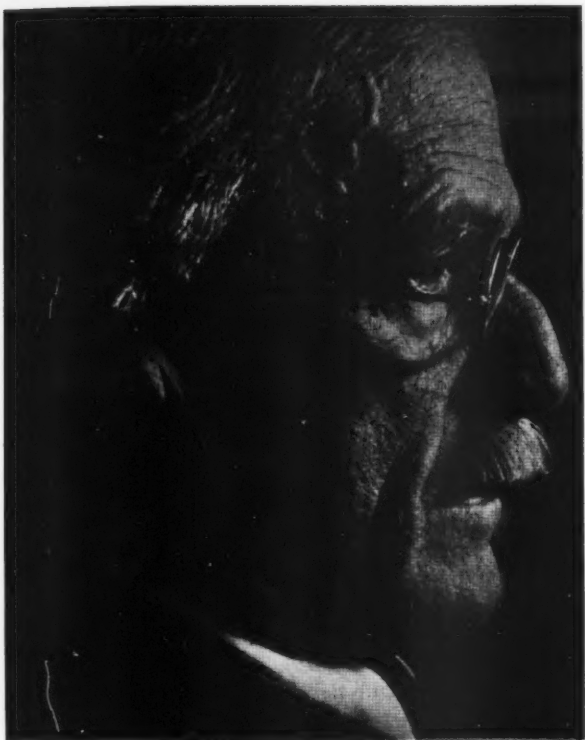
One of the greatest photographers who ever practiced in this country was undoubtedly Alfred Stieglitz. For something over 40 years Mr. Stieglitz has been looking like a Bedouin and everything in his speech and manner was well calculated to *épater le bourgeois*.

Arnold Genthe looks like a painting by Rembrandt, Steichen looks like a Dutch primitive. Of course the picture magazines are breeding a new type of photographer—a sort of super-photo-clerk who prides himself on the anonymity of his visage. We can dismiss him as an interesting mass product along the belt system which produces arid photo-journalism. But the better ones, even among them have a strange and adventurous air.

It is my contention that a certain amount of eccentricity is the indubitable accompaniment to superior skill if not superior intelligence. To be odd is the guarantee of nothing perhaps except oddness. But in a world in which humanity is being leveled off to a dreary monotony—this in itself is a great and welcome relief.



GENTHE, who looks like a painting by Rembrandt, is not one of those photographers who apes the painters. His originality of appearance is matched by uniqueness of mind. Judging from the snapshots on this page, by Martin Harris, the great man finds it easy to lionize a literary tea. And what more beautifully ironic ending, than this candid shot showing him demonstrating to one of his admirers the intricacies involved in threading a roll of film through a Kodak—this by a master of dance and color photography!



ALFRED STIEGLITZ, Dean of 20th century photography, was never a stickler for convention. A born artist, he was the first to recognize the camera as an art medium. Portrait (1934) by Dorothy Norman.

STEICHEN BY STEICHEN, as seen through the lens of an ancient Daguerreotype camera. He exhibited photographs nearly 50 years ago, and is still going strong. More than 30 years ago, he displayed color photographs, but did not give up painting until 1920. Only recently, he traveled to Hawaii to shoot color commercially. He keeps "retiring" and then, like George Bernard Shaw, perennially returns to work.



★ WHAT TO SHOOT THIS MONTH

May

CAMERALMANAC

HERE'S MAY AND THE MONTH OF FLOWERS

MAY is one of the better months. For one thing, it gives many parts of the country their first taste of good weather after the long, hard winter. But May has more to offer photographers than a mere change for the better in weather.

For example, May brings in scads of flowers, all of which are extremely pictorial. They range from such bold blossoms as tulips down to tiny, shy, hard-to-photograph violets. Take your choice.

It seems to me that the tulip has never been properly, pictorially, appreciated; it has subtleties of color as well as of shape; it is strong, graceful, almost geometric in the precision of its contour—and it's a

lovely sight.

In all flower pictures, indoors or out, background is of immense importance. It's a good idea to equip yourself with one or two big sheets of cardboard, one white and one grey, which can be propped up back of your subject to eliminate distracting or undesirable backgrounds. Use dull-surface cards; their purpose is to give tone and contrast. Let the texture and detail be concentrated in your flower.

Lighting, of course, is also a primary consideration. Obviously, you don't want harsh, contrasty light when you're dealing with delicate things such as posies; so you avoid the full glare of the mid-day sun. 8 A. M. and 4 P. M. are usually good flower picture hours. And you'll find that side lighting gives you some of your most beautiful effects. For extreme side- or for back-lighting you'll need one of your big cardboards, the white one, as a reflector to relieve the darkness of the shadow side.

Exposure should be calculated for maximum detail and clarity, and for non-belligerent contrast. Try to avoid working on windy days. To "stop" a writhing flower and, simultaneously, reveal its delicate beauty is quite a job. Or maybe you carry an Edgerton lamp around with you all the time?

A final warning. Keep your flower pictures simple. For flowers go into a panic, pictorially speaking, at the drop of even a small hat. You could do a lot worse than spend a little time studying the pic-

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FLOWERS that bloom in a mass, lilac or snowball bushes and fruit trees in full blossom, make ideal "frames" for Spring portraits. By Victor de Palma from Black Star.





IT'S SPRING for certain! A new Spring outfit, and a big bouquet are inspiring "props" for anybody's best girl. The cameraman has a blue sky dappled with fleecy clouds for a background and soft, flattering sunlight to help him do his best.

By Relang from Three Lions.



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tures in that flower arrangement book prepared by the Coca Cola people.

Best of all, you can study real flowers with your own eyes. . . . Let's see some of your tulip shots. In the meantime, let's run the gamut for the month of May looking for more picture-shooting suggestions, beginning, appropriately enough, with May Day.

MAY HATH 31 DAYS

1. May Day. Remember 'way back when this was a day of innocent merriment, complete with May poles, May baskets, dances, and all such? Nowadays, such goings on are the almost exclusive concern of society news photogs. You'll find May Queens more easily, and gosh, do they love to be pictured. Especially if amply exposed and well developed.

2. Battle of Manila Bay, 1898. Battle of Practically Anywhere, 1941. (Wish this prophecy could be as bad as some we've made.)

3. Kentucky Derby today. Photo-finish guaranteed. It would be grand if all photo finishing were guaranteed.

4. Consider the dandelion. As a photographer, you can look kindly on it, especially when it becomes a seedpuff. One of the best pictures we ever saw in a contest was a small boy blowing a seed-puff to smithereens. Too, seed-puffs make swell, decorative close-ups, well-lighted and against a black background. But, hey, don't be careless with the thing. It's poison for next year's lawn.

5. April showers having brought May flowers, the vernal wind now sweeps in and keeps the pretty little flowers dancing around like mad. Ever try to photograph a posy in a breeze? Try it—just once. You have to speed up the shutter to stop movement, but then you have to open up the lens to compensate for the shutter speed, thereby reducing your chances for good over-all detail and depth of field. Top speed film appears to be indicated. . . . Or yank the flower out by the roots and take it indoors.

6. Looky, the birdies are back! Now, for a change, the camera watches the birdie. . . . If you're really anxious to prove your skill and reaffirm your faith in your own ingenuity, endurance, and patience, take a whirl at some bird studies. If only large white birds, sea gulls frexample, populated our dark trees and shrubs, we'd have no trouble at all. As it is, we find birds are inconspicuous by nature. They love backgrounds which blend with their own shape and color. So, your first problem

is a matter of suitable background. After that you have to overcome birdy timidity. Of course, you can resort to a telephoto lens. But some folks insist it isn't sporting to do so. Phut for that, we say.

7. Rain today. And a good day to look over your equipment. Ever give your lenses a real cleaning? Don't tell me you're one of the kind that blows on a lens and "polishes" it with the day-before-yesterday's clean handkerchief. Dear me, no. Lens tissue is cheap, and a good lens cleaner ditto. And by "lens cleaner" we are not referring to the stuff that Pete, at the gas station, squirts on the windshield.

8. Today Joe Zilch resolves to keep a picture diary of his garden—you know, a shot every week, to reveal posy progress.

9. This day, 1926, Dick Byrd flew over the North Pole. Took a flock of pictures, too.

10. First transcontinental railway in the U. S. completed, 1869. . . . Did you know that the picturing of locomotives and trains is one of today's most assiduously cultivated hobbies? It appears that the making, collecting, and exchange of such pictures is quite as serious a matter as stamp-collecting. And why not?

11. Vardid Kewpie, N. (for "Not") F. R. P. S., brought his exposure meter back to his dealer, 1940, with the request that the battery be re-charged.

12. The dealer, good feller, solemnly agreed to do so. For a fee.

13. New ways to avoid splattering hypo invented on this day in 1890, '95, '97, 1902, '08, and '40. Vardid Kewpie discovers new ways to splatter it, 1941.

14. Albert Einstein born, 1879. "It's all relative," says Joe Zilch, 1941, as he overexposes a portrait of his mother-in-law.

15. First regular air mail service inaugurated in the U. S., 1918. By the way, is there a cult of plane picture hobbyists, akin to the train-picturing outfit? If there isn't, there should be.

16. The "nickel" authorized in 1866, thereby profoundly affecting many an industry. But not photography.

17. Straightening dry, curled-up prints over a straightedge *can* be done but, as Vardid Kewpie discovered (this day two years ago), it's no job for a petulant guy. If you moisten the print very slightly, by steam or by contact with moist blotters, you eliminate the danger of cracking the emulsion.

18. Marble season at its peak. By the way, a supply of small, clean glass marbles is a handy darkroom aid. Every time you use a few ounces of developer solution from one of your big bottles, pop in a few of the marbles so that the liquid level remains up in the neck

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←
WHEN the birches are in young green leaf, and the crest of the hill shines with blooms, it's high time to be out in the sun, of a week-end, camera in hand, picturing your best girl. By Guggenbuhl from P. P. C.

ON GUARD: A soldier
 fortress principles behind
 the capital of Yugoslavia.
 Practically the only one
 the wooden drawbridge
 and with a dangerous
 road growing in the sky
 between.



PEGGY LANE and her camera, a Leica. The daughter of Arthur Bliss Lane, U. S. Minister to Yugoslavia, she has taken pictures in Yugoslavia, Greece, Italy and other countries now at war.

● BEFORE WAR



WHEN I RECENTLY returned after a three year's sojourn in Europe, people asked me why I didn't have more photographs to show for my visit. Others were amazed by the pictures I had succeeded in getting and bringing home.

Some photographers seem to be able to

wave a magic wand and, without the slightest difficulty, produce photographs of fortified zones, occupied territory and other dangerous and forbidden picture subjects.

Not possessing such a subtle art, I finally decided I could either give up photography and remain in Europe or return home and pursue it here. This was after work-



FOURTH NATIONALS...
 one day...
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BROKE IN THE BALKANS

SNAPSHOOTING IN WAR-JITTERY EUROPE — COPING WITH RESTRICTIONS, CENSORS, GUARDS AND MILITARY REGULATIONS

BY PEGGY LANE

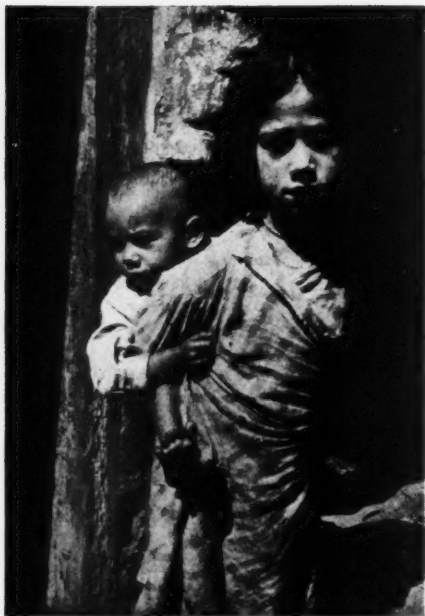
PHOTOGRAPHS BY THE AUTHOR

WAR IN YUGOSLAVIA has brought disaster close to the homes of many varied racial groups. Below is a typical Dalmatian peasant woman.



EVERY GROUP has its own colorful type of costume, as reflected even in the clothing of these smiling, happy Dalmatian youngsters.





WAR IN LIBYA has hardened the face and the heart of many a twelve-year-old, such as this, who is sunning her baby brother on her back.

ing for more than a year in Yugoslavia before war came to that country.

● **EVEN IN** countries which were still neutral, it was dangerous to carry a camera. One afternoon in Lisbon, Portugal

for instance, I decided I would snap the pictorially beautiful old city and set out with my trusty Leica and a couple of filters. I was scarcely two blocks from the hotel when a policeman stopped me. When I produced my diplomatic passport he let me go. Later, I was advised by the American Legation not to use my camera at all, even to photograph the most innocent scenes. He said that the country was so jittery over fifth columnists that the most elaborate precautions were felt necessary.

In Yugoslavia I was arrested several times for snapping only market places and character types. To be put into a Balkan prison not knowing much Serbian is no fun and I decided I had better be content with sketching still-lives at home.

Once, I wandered into a military camp by mistake near the German-Yugoslav frontier. I was armed with two cameras and a tripod. I had been taking photographs of the golf course at Bled, and reconnoitered up the wrong road. When I found my error I beat a hasty retreat and no one said a word or fired a shot.

I spent ten days in Italy enroute to the U. S. I photographed many ordinary scenes. When I took the plane from Rome to Lisbon, however, my Leica was taken and locked in an iron box, to be returned at the end of the trip.



WAR IN BERMUDA means inspection of every ship that passes. Only because of her diplomatic credentials was Peggy Lane permitted to photograph the British secret service men shown above boarding her ship.



WAR IN ENGLAND means ear-splitting bomb thunder even in the pastoral setting of Hyde Park, London. Deer roaming in Hyde Park are so frightened that only severest hunger brings them out of hiding.

In Germany, you may not even board a plane with a camera. And to carry a camera anywhere it was necessary to obtain a signed permit from Mr. Goering himself.

Obtaining photographic supplies was difficult in Yugoslavia, where all films and paper are imported from Germany.

It was usually possible to buy one box of the imported German Velvet Medium but the quality and contrast of this one surface varied. Since the war, strange things happened to this paper. Over and over again I opened a brand new box to find half the paper faulty. Some of the sheets, when developed, resembled a London fog, others a surrealist pattern by Salvador Dali. I often complained, but somehow my complaints never seemed to reach their destination at the Agfa Atkiengesellschaft in Berlin.

Some Kodachromes I had developed in Germany were returned with one out of every three rolls scratched and off-color.

In addition, postal censors at the frontiers do not know how to handle delicate color transparencies. Mine always reached me with beautiful German thumbprints and scratches. One Englishman in Belgrade sent his Kodachromes to England via Turkey, the Suez, and then the Cape of Good Hope, and finally to England via the risky route of Lisbon, past German U-boats and mines. A year and a half later he received them.

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WAR IN ITALY has made bread terribly scarce and high-priced. Here an Italian "ragazzino" gazes longingly at some loaves of ultra-expensive and highly synthetic Italian bread.



WAR IN GREECE brought temporary prosperity at least to this tintype photographer in Athens. He does a land-office business at his stand near the Acropolis.

WAR IN ROME has been more remote than in bomb-scarred London. This rainy scene shows Rome the day Italy declared war on Greece. Only a few party officials and government workers on their way home from work were in the Piazza Venezia when the announcement was made.





THIS SUBJECT was lighted for dramatic character. To prevent looking harsh, it was printed on soft paper. To avoid a flat appearance, it was developed in a hard-working developer. FIG. 1

A NEW SYSTEM HAS BEEN worked out for the control of print contrast during development, based upon the use of two separate developers instead of a single one. Each developer has distinct characteristics. One yields especially soft prints if used alone, whereas the other produces maximum brilliance and exceptionally deep blacks. However, the real value of the two developers is that they have been designed so that prints can be developed partially in one and partially in the other in order to bring out full highlight rendering and at the same time good shadow brilliance.



SAME subject printed on same paper with ordinary development is flat and lacking in the "snap" required for dramatic effect. FIG. 2

Two-Tray

The two developers are given below, designated by the number as they are now listed on the Agfa Ansco formula book.

The control of print contrast in development has been a neglected subject. Of course, the practice of shortening the print exposure and prolonging development, or lengthening the exposure and reducing the print development is being practiced with a certain amount of success. But this practice usually leads to a change in the tone of the printing paper—prolonged development tending to give colder than normal tones and shortened development warmer than normal tones.

It will be noted that the soft-working formula (No. 120) contains only metol as a developing agent, one that has long been recognized as soft working due to its energetic nature. Because of this energetic characteristic the developer brings up the low-exposure regions (the highlights) rather rapidly. Before the shadow densities have developed to completion, the highlights are almost fully rendered.

The hard-working developer (No. 130) contains a combination of three developing agents: metol, hydroquinone and glycin. This combination as found in the formula does not bring out the highlight details so readily, but rather seems to favor the heavily exposed areas (the shadows).

● THE TWO TRAY procedure can be used for all printing purposes. It is not simply a method for special cases. For example, if a negative does not give a good print on any grade of paper and developer combination simply because the highlights are not fully rendered when a paper grade is selected that is most suitable for

Print DEVELOPMENT

BY LLOYD E. VARDEN A.R.P.S.

the shadow rendering, then that negative with the same grade of paper could be developed as follows: After exposing the paper the print would be developed in the soft developer for $1\frac{1}{2}$ minutes whereupon it would be transferred to the hard developer for 1 minute or, until such time that the shadows were completely developed. The print would then have good highlight detail and brilliant shadows. The effect is vividly shown in Figs. 3, 4 and 5. The developers should be kept at about 68° .

Experience in using the two tray procedure will

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SOFT-WORKING DEVELOPER (AGFA 120)

Stock Solution		
	Metric	Avoirdupois
Hot Water (125°F. or 52°C.)	750 cc.	24 ounces
Agfa Metol	12.3 grams	$\frac{1}{4}$ oz. 70 gr.
Agfa Sodium Sulphite, anhydrous	36 grams	1 oz. 88 gr.
Agfa Sodium Carbonate, monohydrated	36 grams	1 oz. 88 gr.
Agfa Potassium Bromide	1.8 grams	27 grains
Water to make	1 liter	32 ounces

For use, dilute 1 part stock solution with 2 parts water.

HARD-WORKING DEVELOPER (AGFA 130)

Stock Solution		
	Metric	Avoirdupois
Hot Water (125°F. or 52°C.)	750 cc.	24 ounces
Agfa Metol	2.2 grams	32 grains
Agfa Sodium Sulphite, anhydrous	50 grams	$1\frac{1}{4}$ ounces
Agfa Hydroquinone	11 grams	$\frac{1}{4}$ oz. 50 gr.
Agfa Sodium Carbonate, monohydrated	78 grams	$2\frac{1}{4}$ ounces
Agfa Potassium Bromide	5.5 grams	80 grains
Agfa Glycin	11 grams	$\frac{1}{4}$ oz. 50 gr.
Water to make	1 liter	32 ounces

For use dilute 1 part stock solution with 1 part water.

Greater contrast can be obtained by using the developer stock solution full strength.

TO GET good tonal characteristic throughout this print, it was developed for $1\frac{1}{2}$ minutes in the hard-working developer and for $1\frac{1}{2}$ minutes in the soft-working formula. Here are rich blacks and fully-developed highlights. FIG. 3



DEVELOPED full time in the soft-working developer, there is not enough contrast. Note how flat the print is with grey highlights and weak blacks. FIG. 4

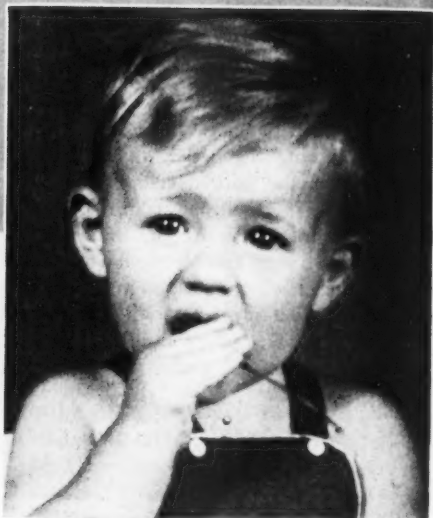


DEVELOPED in the hard-working developer, there is too much contrast. The highlights are "burned up" in side of the cheek and shirt collar. FIG. 5

Moods



1. "BOY PICKS a daisy." Eleven-month-old Bobby Scholl prepares to run the gamut of emotions for William Arkill's miniature camera. The daisy in Bobby's hands was the only "prop" used to produce the expressions.



2. "DECIDES to eat the pretty flower." Bright lights and cameraman are forgotten. Bobby turns his attention to finding what a flower tastes like.

"**H**ERE'S A picture of little Bobby eating —" or sleeping or playing, says the proud parent or photographer, and lets it go at that.

Not so with William Arkill, an Ohio machinist and amateur photographer who believes that a single snapshot of a child cannot tell more than a part of the story. A modern "portrait" he says, should consist of at least half a dozen pictures, and preferably more. This philosophy met immediate approval at the picture editor's desk of the New York newspaper *PM* which purchased and published a number of snapshots from the series here reproduced of Bobby Scholl, age 11 months.

Not having any children of his own to photograph, machinist Arkill visited a next-door neighbor, the parents of Bobby, and they thought that picture-taking was an excellent idea.

Given a flower to play with, Bobby at

first, thought it very interesting. Then (Fig. 2) he started to eat it. When the flower was taken away and then given back to him, the child registered emotions from pleasure to gloom and back to happiness again, as shown in the six pictures here reproduced. Exposure for these all was 1/25 second at *f*8, using a Wirgin camera and No. 2 flood lights.

When possible, Arkill makes it a practice to get well-acquainted with his young friends. He takes pictures of Bobby Scholl every few weeks, and the young model has become accustomed to sitting under the lights and having his friend talk to him while he does something with a funny little black box. Usually the boy pays little attention to the photographer except when directly asked to do something.

Making a game of picture-taking with these young subjects results in their becoming very apt and cooperative models.

of Master Scholl



3. "HE DOESN'T like the situation." Bobby's mood changes from curiosity to bewildered sorrow as his mother snatches the daisy from his lips. A storm is brewing.



4. "STORM clouds gather." A frown wrinkles Bobby's brow as he sees the daisy disappear into a wastebasket. The photographer, shooting all the time, starts a conversation to help Bobby forget.



5. "FORGET and forgive." The daisy is ancient history as Bobby turns his attention for a moment to a comic gesture of the cameraman. He turns loose a great big smile and the camera gets it.



6. "THE SUN shines again." All is peaceful in the mind of Master Scholl as the camera records this winning expression. In half repose, Bobby's face and personality are at their best.

★ PAINTING

HEADLIGHTS of moving automobiles on a street at night form streaks of light on the film, illustrating the principle of painting with light.

THE sensitized film in a camera often is compared to the retina of the human eye. The image cast on a piece of film, however, makes an indelible image. This permits the parts of a picture to be illuminated independently of each other, with the assurance that the parts all will appear assembled on the final print.

The "Painting with Light" method permits a single light to be used to illuminate a room or a hall that might ordinarily require a dozen light sources. The method is valuable in making copies or photographing subjects such as glassware which require illumination that is more evenly distributed than is possible in ordinary procedure with any number of lights. A third application is in trick photography.

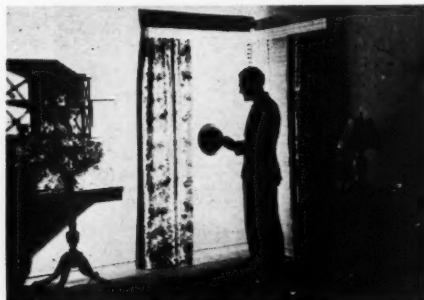
The technique in all cases is the same.



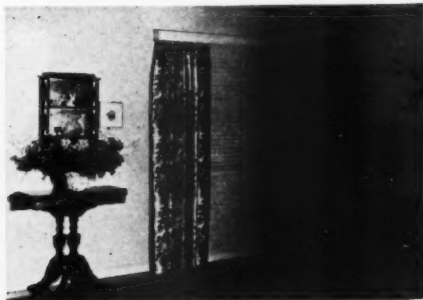
1 THE BEST method of painting with light is to work in front of the camera, remaining in the shadow back of the reflector.



2 RESULT obtained by painting the right half of the scene as shown in Fig. 1. Note that photographer's image is not recorded.



3 NEXT the photographer moves to the opposite side of the scene and throws the light evenly over the areas not previously lighted.



4 THIS balances the distribution of light. A chair appearing in the final picture (Fig. 7) was removed for convenience in illustration.

WITH

Light

The picture can be taken indoors or outdoors at night, the only requirement being that there be no illumination on the scene except from the lamp in the operator's hand. Such illumination as will permit the photographer to see his way around is not objectionable as it will not register on the film.

The light source can be a photoflood lamp, an ordinary reading light, or even a pocket flashlight. "Painting with Light" is accomplished by setting up the camera on a tripod, table or other firm support,

Photographer Applies Light to Scene Like Painter Putting Pigment to Canvas

"Walkaround" Technique Permits Photographing Large Areas with a Single Lamp

*From "The Technique of Painting with Light"
By Leslie C. Walker — Nash-Jones Co., Publishers*



5 TO PAINT the floor, the reflector is held in this position. Note how photographer's failure to keep light moving can cause overexposure.



6 CORRECT use of the light produces even lighting. Note photographer's silhouette, however, a result of remaining in one position too long.

7 THE FINAL picture shows the extremely even lighting that resulted from correct painting of this scene with a single flood bulb in reflector.



and setting the shutter on "T" for a time exposure. All lights are then turned out, and the camera shutter opened.

The photographer places himself behind the camera with a light that he can turn on or off and direct to various parts of the picture area. If the subject being photographed is large, the photographer can walk right into the picture to apply light where desired. With a watch or by counting, the amount of light given to each part of the picture can be accurately controlled. Flat, even lighting may be applied. Parts of the picture can be high-lighted or kept in shadow by applying more or less illumination as desired. Shadows can be "painted" out.

After the "painting" is completed and the light turned out, the photographer walks back to the camera and closes the shutter.

Choice of film. For most subjects, a relatively long exposure, say about 10 to 20 seconds or more is desired in order to minimize errors in timing. This means use of a slow or medium speed film such as Agfa Finopan or Eastman Panatomic-X.

Aperture. For the above reason and to obtain depth of field, the smallest lens opening usually is used. This is about $f/16$ on many cameras.

Camera. Any camera can be used. In fact, because of the small aperture employed, even an ordinary box or snapshot camera will give good results. It must

have a "T" or "time" setting to permit the lens to remain open for the time exposure.

Camera accessories. A tripod to hold the camera is desirable. A lens hood may help keep stray light out of the lens. Any available light source may be used.

Exposure. Exposure will be about 10 seconds at $f/16$ for an average 10 by 12-foot room when using film about the speed of Finopan or Panatomic-X and one No. 1 flood lamp in a reflector.

For larger areas, a No. 2 or No. 4 flood lamp may be used, but the larger the light source the greater the danger of obtaining "hot spots" or uneven illumination.

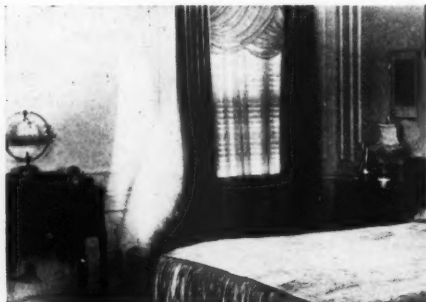
Exposure meter. Use of an exposure meter easily permits accurate timing. Readings are taken from various parts of the subject to be exposed accordingly. The light is set a predetermined distance from each wall, for example, and a reading taken.

If the light will be more distant from some of the walls, those areas naturally will require a longer exposure time as the lens aperture remains fixed throughout the exposure.

The time exposure is under complete control of the operator, so if in doubt about the way to handle the light for a certain area, merely turn off the flood lamp, and plan the next move. The camera must not be moved or jarred.



8 SMALL interiors may be completely painted with light from beside the camera. This picture was made without walking in front of the camera, as the room was small enough that this was unnecessary. DATA: Slow film, $f/16$, 10 seconds.



9 THE WHITE marks at left of drape, above, are result of stray light falling on lens as photographer worked in front of camera. Painting too much light on any single area also produces undesirable bright areas, giving spotty results.

The illustrations on these pages show the step by step method for photographing an ordinary room about 10 by 12-feet in size.

The following method aids in obtaining even distribution of light: Imagine the interior is barrel-shaped and that you are photographing into the end of the barrel. With circular motions of the light "paint" the inside of this imaginary barrel moving the light toward the far end of the scene in a spiral or corkscrew fashion. Gradually "paint" more slowly as the light approaches the far end of the subject. The same type of motion is used, but the speed of rotation is kept constant if the photographer steps in front of the camera and "paints" all parts of the subject from the same distance. This last procedure is the best way to supply enough light for large interiors such as churches, banquet halls, skating rinks, dance halls, etc.

Groups of people also may be photographed with this "painting" technique. For such subjects, darken the room, or stop down the lens enough so that only the light from the flood lamp records the scene. Caution the people that when the light falls on them they must remain perfectly still. One trick is to keep up a running comment during the exposure, repeating, "Be still when the light is on you" over and over until the entire group is photographed.

If the light cannot be subdued and it

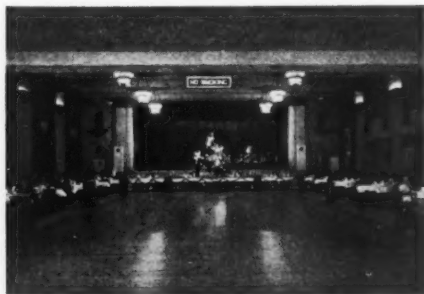
is impossible to stop down enough to control the room illumination, the entire group must remain quiet during the entire exposure.

In many types of group pictures it is desirable to show the background clearly. By leaving the camera in the position from which the group was photographed, the background may be "painted" in a separate exposure. Make certain to include enough area around them in the first exposure so that there is no danger of exposing some objects that were concealed behind the group when making the exposure for the background. Make several exposures of the group. After the group has left, re-expose each film to the same scene, and "paint" the background, walls, and ceiling, but not the spot where the group stood. Each film receives a double exposure.

To photograph action, flash bulbs may be used for the first exposure. If the background receives insufficient exposure from the flash, "paint" in with flood light in a second exposure. When convenient, the background may be painted in first and the action flash shot made afterward.

Even small houses can be "painted" exactly as interiors. For small still subjects, indoors or outdoors at night, a flash-light will work satisfactorily. When using such a dim light source, however, use speedy film and the widest possible aper-

(Page 88, please)



10 THIS LARGE hall was exposed by the photographer walking in front of the camera, "painting" the scene and the persons seated at the tables. The lens was stopped down so that the regular room lighting did not register on the film.



11 THIS WEDDING picture shows the result of photographing a group with one exposure and the surroundings with a second exposure while the camera remained unmoved. This method is useful when background detail is desired.



1. Light happens.
Sun splits hairs in the fuzz
of the blanket.
Time to get up.



2. Look at her . . . Dead to
the world.
Hey! Wench! Lookut.
Sun's shining.
Oh, very well.

What is there to picture? The camera fan, groping to find himself in relation to photography often asks this question. The answer is, "Picture the things closest to you, the things you know best." And what is closer than oneself? By means of his camera, the photographer joins the company of the painter with his self-portrait, the statesman with his memoirs, and the novelist with his autobiography. How to film your own picture-story is described following this article.

One

● A PICTORIAL SELF-PORTRAIT

AS TOLD IN PICTURES AND WORDS BY WYATT BRUMMITT

There was a time when a man who had something to say had to use a chisel and hew his message out of solid rock. More recently, he could utilize a writing quill, or a fountain pen or a typewriter. Today, with the perfection of photography, he has a new literary instrument—the camera.

The picture of modern human life is not to be limited by the notions of classical painting or by the salon-print horizon. It is a picture of an everyday home, a car, a job, and calls for sensitized gelatin to record those small but significant images—perhaps the texture of a blanket in the

light of early morning, a grapefruit at breakfast, or the chill and stimulus of the morning shower.

Everyone who takes pictures and can utilize the technique of pictorial journalism is a potential novelist and story-teller. As an example of what can be done, without any special equipment beyond an inquisitive and perceptive mind, MINICAM herewith reproduces in 40 pictures the story of a day in the life of a young man who works in an editorial office and leads a life characteristic of any one of a thousand U. S. citizens.—Ed.



3. I wonder what is the moral equivalent of a shave? That would be important.



4. Showers also help. And party-line plumbing begins the day's social contacts. Tricky, this temperature-tuning.

Day

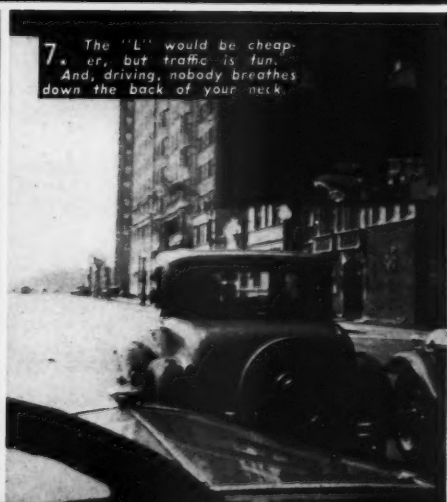
"BEHIND THE SCENES, IN THE EYES AND MIND OF A MAN DURING THE WAKING HOURS OF A SINGLE BUSINESS DAY."



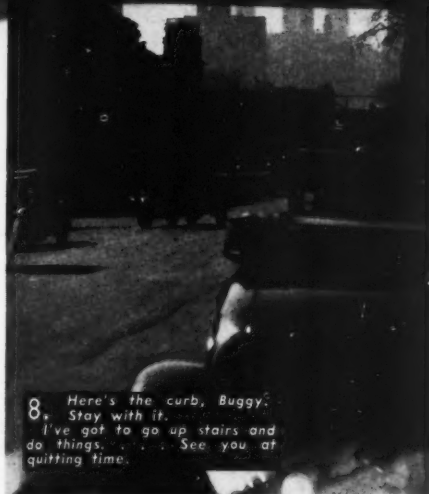
5. WAR in the headlines!
Um...
I'll concentrate on grapefruit.
Fore.



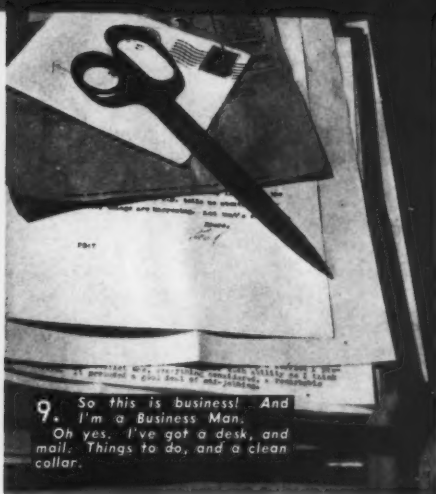
6. Sky.
We take it for granted
and ignore it. If we do look
up there's usually something in
the way. That's a comfort.



7. The 'L' would be cheap-
er, but traffic is fun.
And, driving, nobody breathes
down the back of your neck.



8. Here's the curb, Buggy.
Stay with it.
I've got to go up stairs and
do things. . . . See you at
quitting time.



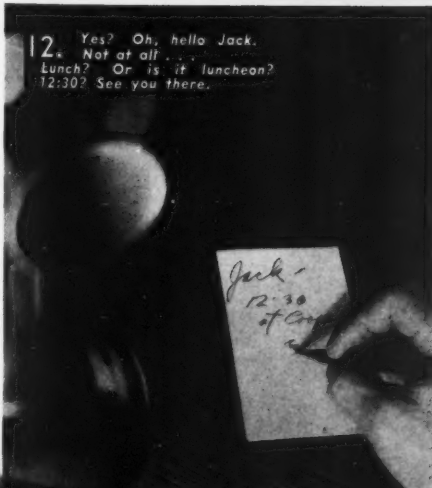
9. So this is business! And
I'm a Business Man.
Oh yes, I've got a desk, and
mail. Things to do, and a clean
collar.



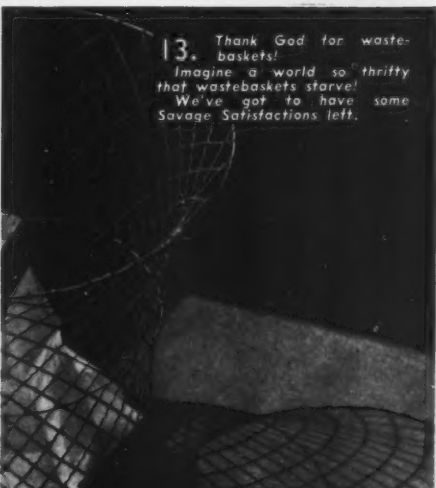
10. Now we'll write some
letters.
And a very good ankle it is,
too.
"Dear, Mr. Adams . . ."



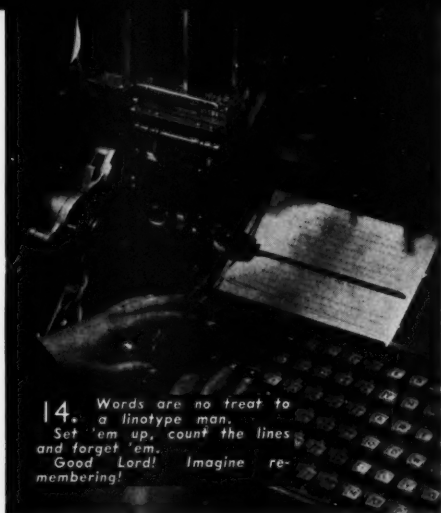
11. A clean white piece of
paper, to be straight-
ened carefully and littered with
words.
Hm, now what?



12. Yes? Oh, hello Jack.
Not at all. . . .
Lunch? Or is it luncheon?
12:30? See you there.



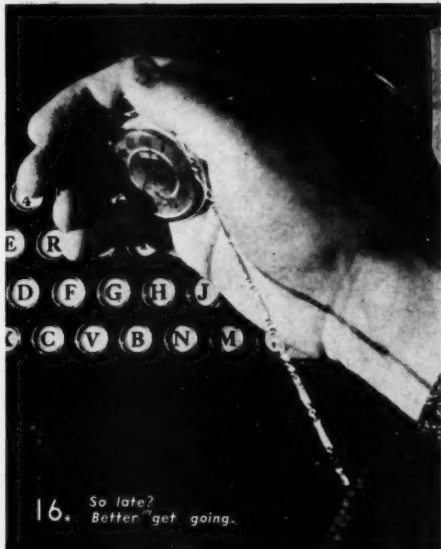
13. Thank God for waste-
baskets!
Imagine a world so thrifty
that wastebaskets starve!
We've got to have some
Savage Satisfactions left.



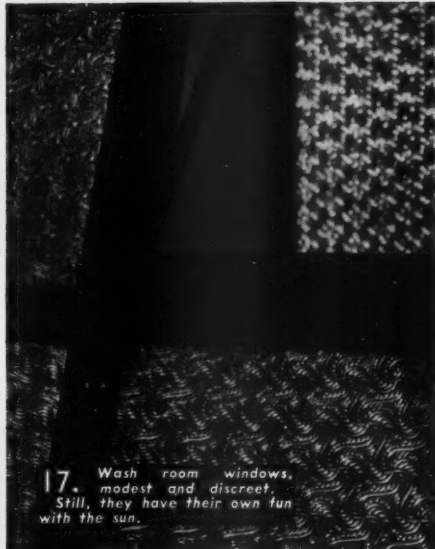
14. Words are no treat to
a linotype man.
Set 'em up, count the lines
and forget 'em.
Good Lord! Imagine re-
membering!



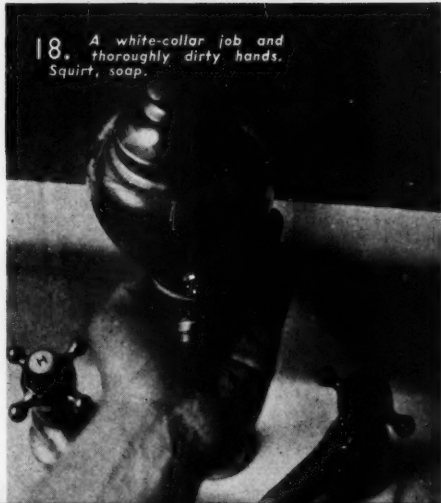
15. Dead words in the hell
box . . . I wonder if
that shiny line was mine?



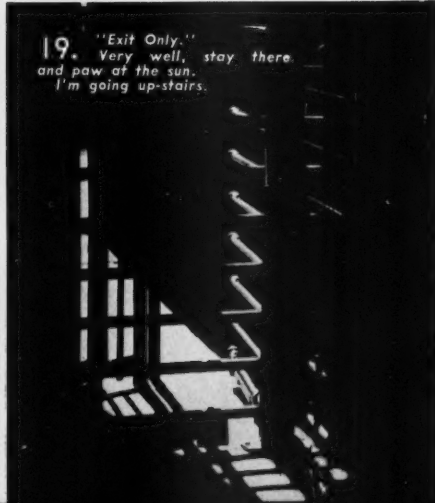
16. So late?
Better get going.



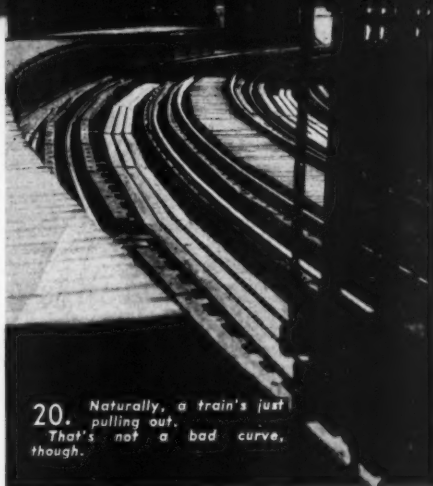
17. Wash room windows,
modest and discreet.
Still, they have their own fun
with the sun.



18. A white-collar job and
thoroughly dirty hands.
Squirt, soap.



19. "Exit Only."
Very well, stay there
and paw at the sun.
I'm going up-stairs.



20. Naturally, a train's just pulling out. That's not a bad curve, though.



21. These old "L" stairways have a way with them.



22. Basement restaurants should always have good stairways. Great aids to appetite.



23. What're you having, Jack? It will not . . . They put canned pineapple in their fruit salads.



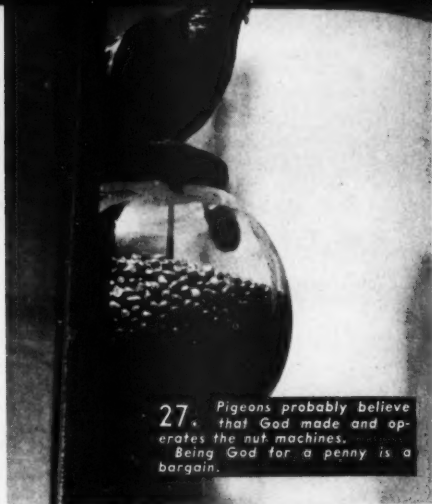
24. Go ahead, I'll even light your cigarette. Me, I smoke tobacco.



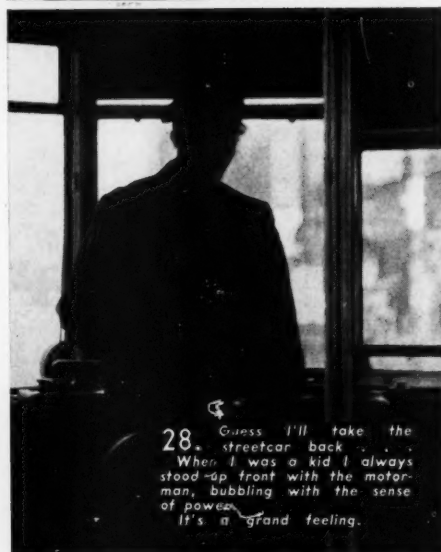
25. Ate too much, as usual. Good thing it's only a short flight up. See you soon, Jack.



26. Whistler's Mother, reversed, with chocolate bars.



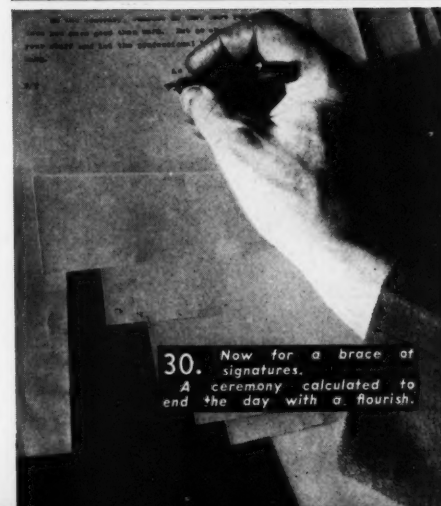
27. Pigeons probably believe that God made and operates the nut machines. Being God for a penny is a bargain.



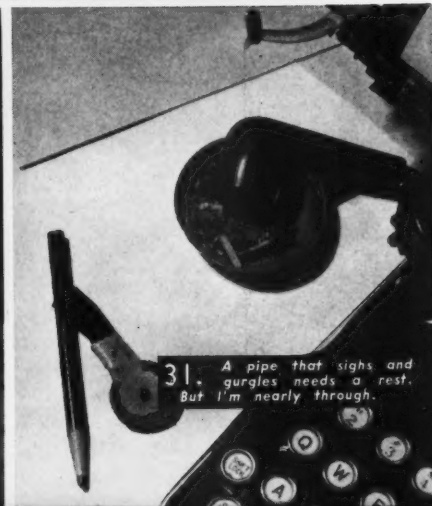
28. Guess I'll take the streetcar back . . . When I was a kid I always stood up front with the motor-man, bubbling with the sense of power. It's a grand feeling.



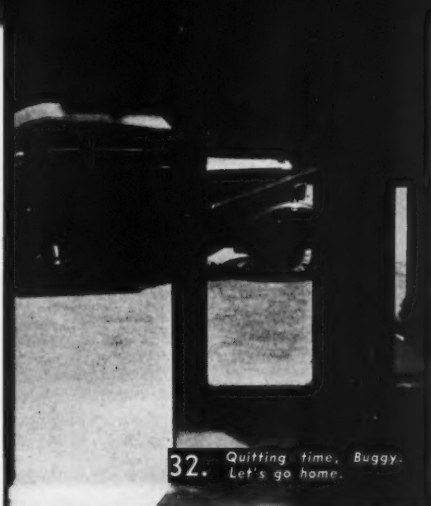
29. Back again. Where was I? Oh yes, what the devil was that word?



30. Now for a brace of signatures. A ceremony calculated to end the day with a flourish.



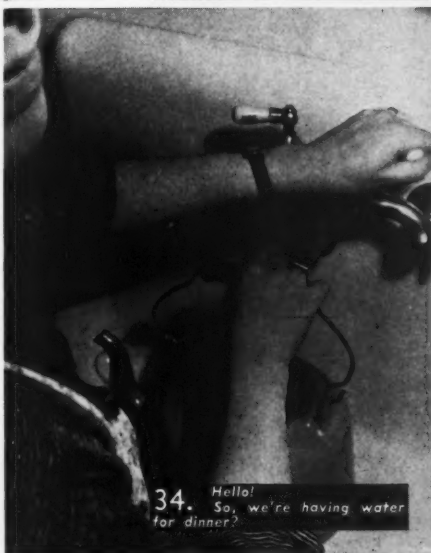
31. A pipe that sighs and gurgles needs a rest. But I'm nearly through.



32. Quitting time, Buggy.
Let's go home.



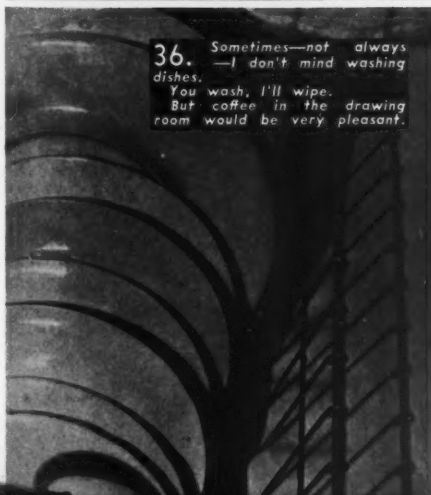
33. I can't see why people
scoff at suburbia.
A man must breathe.



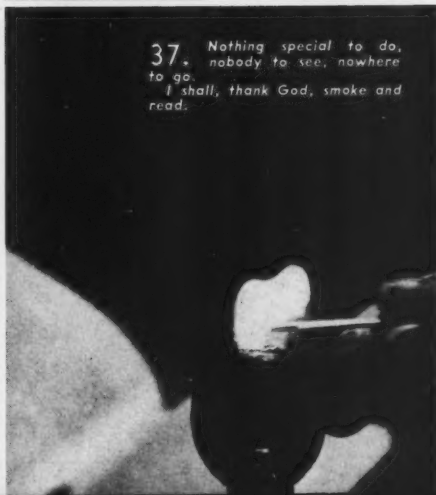
34. Hello!
So, we're having water
for dinner?



35. Candles are sentimental,
but so is dinner.
(We might be eating in a
cafeteria)
Even the water tastes better.



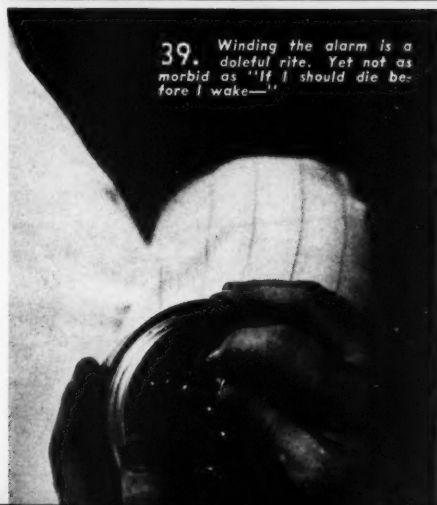
36. Sometimes—not always
—I don't mind washing
dishes.
You wash, I'll wipe.
But coffee in the drawing
room would be very pleasant.



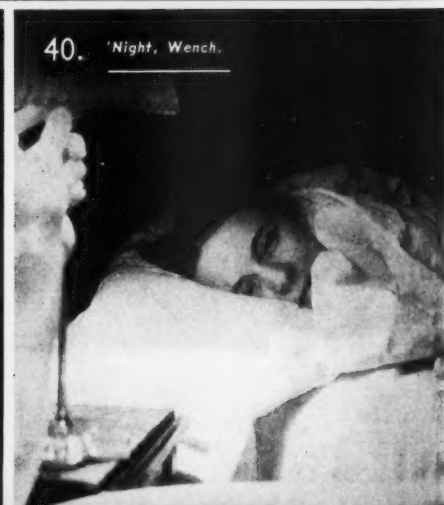
37. Nothing special to do,
nobody to see, nowhere
to go.
I shall, thank God, smoke and
read.



38. Trundling the car around to the garage is pleasant. There's sky, and the trees are still awake.



39. Winding the alarm is a doleful rite. Yet not as morbid as "If I should die before I wake—"



40. 'Night, Wench.

A PICTURE STORY OF A DAY IN YOUR OWN LIFE

USE THE TECHNIQUE OF MODERN PICTORIAL JOURNALISM

YOU have seen "One Day" a sequence of photographs, beginning on page 38, depicting one man's day, as seen through his own eyes. Look it over. You may find it interesting. Possibly it will give you an idea or two for a picture parade of your own.

The ordinary illustrated story assays about 90 percent verbiage and 10 percent pictures. In a real pictorial sequence, words are reduced to an absolute minimum. In some cases there are no words at all. But the story gets across, and very vividly.

From a photographic viewpoint, the picture sequence offers an opportunity for variation that is practically limitless. For example, suppose every man, woman and youngster in the United States were to do his or her own "One Day." No two could possibly be alike. There you have about 130 million variations to begin with. But the pattern is a tightly restricted one. It concerns one person, one day, and a very limited set of activities. The minute you break away from that pattern your variations multiply astronomically.

For example, a sequence might—and could—be made to cover a period of years. In most families there are right now, pictures of the youngsters made at odd intervals during their growing-up years. But they have been made haphazardly, so that there is no continuity, no plan. Thus they are simply so many unrelated snaps. With a little care, however, the picture story of Johnny growing up could be made interesting to more than parents and intimate friends.

● **ANOTHER TYPE** of sequence can be planned on the basis of a new house, starting with a vacant lot and ending with the house-warming. In any such

series, the good story introduces a change of pace now and then—maybe a touch of comedy, maybe a close-up of Sid, the carpenter, starting a fresh chew.

At the other end of the time-lapse scale, your story might be concerned, not with a generation or even a single day, but with the single, hectic hour betwixt getting up in the morning and getting off to work, or to school. Heaven knows, in most homes there's enough action, feverish frustration, and comedy in this hour to make a really exciting series.

The primary essential of any sequence is something, no matter what, which is common to every picture in the series. In "One Day" the common denominator is the first-person-singular point of view from which each picture was made. In another type of series, it could be a person or an object or a background.

But there must be something to assure the beholder, as he views each consecutive picture, that the story, begun in preceding pictures, is still going on. In other words, don't let your audience forget that you're telling a serial story. If you shift the general scene, be sure that there's a character or an object which will be recognized as having had a part in the earlier pictures.

Be careful, too, not to shift the style of your story telling—unless you specifically do it for dramatic emphasis. For example, if your series starts off with a number of crisp, full-contrast shots, don't change suddenly to a soft, high-key type of presentation unless, in so doing, you gain an effect that will emphasize a special point.

To hold the interest of your audience throughout a series, keep individual pictures as simple as possible. Otherwise the points you are seeking to make will be obscured and lost in a welter of unimpor-

tant detail. Take your cue from the comic strip artists. Those boys know the secret of simplicity.

● **NATURALLY, THE FIRST** consideration in any series is an Idea. It's like the old recipe for angel food cake — "first catch an angel." And the secret of a good idea for any series to be made by you, is this: the theme must be something in which you are interested, or about which you have special knowledge. If I were to try a series on the sex life of the goldfish, I'd succeed only in being pretty darn silly. Because I don't know a thing about goldfish, and care less.

The situation is exactly parallel to the principle that our public speaking coach, back in high school, used to expound. "I don't care if you're tongue-tied and stutter," he used to say, "but if you get up to talk about something in which you're really interested, you can hold your audience." Maybe your major passion in life is whittling. Very well, when you talk about whittling you put something besides mere words into what you're saying. That extra something will put you across to your hearers.

With your basic idea established, the next step is to outline a continuity of the pictures needed to put that idea across in the most vivid and compelling way. The usual tendency is to include too much, too many pictures in your continuity. That's perfectly satisfactory *if* you exercise your editorial authority to cut material and kill pictures as the job nears completion.

● **WITH YOUR** continuity prepared, the next step is a shooting schedule. If your series includes both indoor and outdoor material, segregate the shots into those two major divisions. To achieve the lighting and composition you have in mind, the outdoor shots will have to be made at certain specific times of day. Note those times on your schedule. The indoor work will depend more on the availability of props and models.

There are some, I know, who instinctively recoil from any such carefully pre-

pared procedure. Such folks prefer to "play by ear," to seize a moment's inspiration. That's all very fine, but I think you'll find that shooting according to script is fully as interesting as relying on a kind of spontaneous combustion. It's true that you are likely to discover, in the course of your work, material or opportunity for unplanned shots that can help your sequence along. Fine, make the most of all such breaks. But don't count too heavily on happy accidents. It's risky business.

The actual photographic technique employed is entirely your own business. If you have a photographic style, make the most of it. But make it subservient to the idea you seek to present.

● **WITH YOUR** negatives all assembled, the next problem is Format. Of course, you can make a batch of contact prints, assemble them in proper order, and hand them out to your friends with the comment, "Look. It's a photo-sequence." And your friends, being charitable, will thumb through your prints and say, "Hmm. Yup, so it is." If you're wise, however, you'll not let your idea down with any such slipshod presentation.

If the job's worth doing, it's worth doing up in presentable style. The very least you can do is to mount the pictures, in sequence, in a folio. Beyond that, the possible variations are rich. Use albums, spiral bound books—anything you can think of which will dress up your idea so that it gets across well. Of course, over-elaborateness can kill it, but anything that is over-elaborate deserves to be killed.

About size. Make your prints large enough so that more than one person can enjoy them at the same time. I know from experience that enthusiasm and appreciation is doubled if two or three folks can share the experience of following a photographic story. Eight by ten inch prints on good firm mounts is suggested. Larger prints, plus mounts, involve bulkiness that may handicap enjoyment.

If your pictures are accompanied by captions, in prose or verse, be sure that

(Page 84, please)

ONE HOUR OF HOME MOVIES

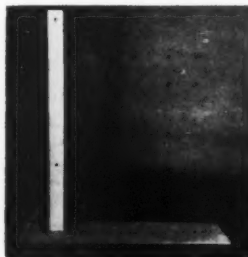
GIVE AN UNINTERRUPTED SHOWING--
HOW TO MAKE A 1600-FOOT REEL

A PAIR of 400-ft. film reels can be converted into 1600-ft. reels with coat hanger wire extensions.

By VICTOR H. WASSON

● WITH ONLY minor changes in the regular reels used for home movie projection, you can present a full hour of projection, uninterrupted by changing reels and re-threading.

Whether showing an accumulation of family and vacation films, or a movie rented from a film library, the larger reels make both projection and viewing more fun for everybody.



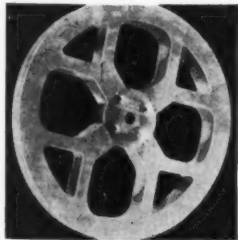
A piece of wood 1x2x28" makes the reel support. Drill holes at points 9" and 25" from bottom. Into these drive 1" nipples of 1/8" brass to provide bearings for reel shafts.



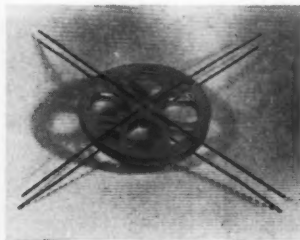
Reel shafts are 3/8" bolts, 3" long. A 1" Erector pulley on the lower shaft takes projector take-up belt. Upright is held rigid by wire brace to the baseboard.



Heavy nails, driven around a circle 15" in diameter, form a template for the outer rims of the reels. Bend lengths of No. 10 galvanized wire around this circle and solder the overlapping ends.



Inside the center core of a regular 400-ft. reel drill four holes. Insert spokes of coat hanger wire about 8" long from center to tip.



Bend the wire spokes at right-angles. To insure a true-running rim, slip the reel over a nail driven in the exact center of the template circle. Reel is ready for attaching rims.



Solder the spokes to the wire circles that form the outer rims. When all joints are soldered, file them smooth and bend the reel into exact shape in the hands. Paint with enamel.

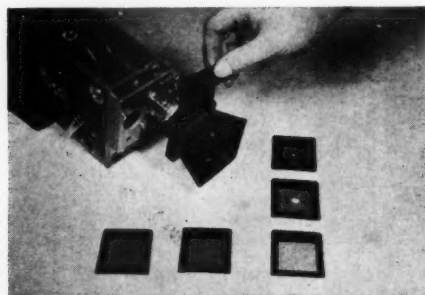
Filters



COLOR FILTERS of glass are used in motion pictures, just as in stills, to emphasize clouds and other effects. FIG. 1



FOR ECONOMY, color filters may be purchased in gelatine form. Being thin and fragile they must be mounted. Simple metal frames are now available, or the cardboard mounts used for Kodachrome slides may be used. Either will fit the 2" square filter holder or matte box. FIG. 2



EFFECT FILTERS. Two upper right are diffusing irises—diffusers with holes punched in the center. Fog filter is made of WHITE gauze or white knitted silk jersey. FIG. 3



TYPICAL scene on pan film without filter. FIG. 4



SAME film with Aero-2 yellow filter. FIG. 5

A PROFESSIONAL cinematographer would as soon leave his camera at home as his filters. That fact is testimony to the importance of filters to the screen quality of the modern motion picture.

Filters are used for a number of purposes in movies. First, of course, for pictorial quality just as in still photography. That means cloud effects, first of all. It also means better color rendition, and control of contrast.

But in a film, filters are also used for dramatic purposes. Night effects, fog, diffusion, all these are aids in carrying out a film story. And all of them are made with filters. Hence their importance to the professional and the amateur alike.

For our purposes, filters may be divided into two classes, *color filters* and *effect filters*. Almost always, they are used over the lens of the camera. Some cameras have provision for inserting the filter into the sunshade of the lens. On others, the filter must be placed over the lens hood. Since light falling on the front face of a filter will cause the same sort of flare that sunlight falling on the lens itself will, a sunshade should always be used over a filter.

FOR EFFECT AND COLOR

WRITTEN AND ILLUSTRATED BY JEFFREY QUINN

Two types of shades, and filters to fit are shown in Figs. 1 and 2. The upper set is the conventional round shade and round filters to fit. Fig. 3 illustrates the matte box, whose use for trick effects was shown last month. This box also holds 2-inch square filters of any type and makes it possible to use a single set of filters for all lenses.

Color filters are made (1) of plain gelatine, (2) gelatine cemented between glass plates, and (3) solid glass, or plastic. Any of these types is satisfactory, though plain gelatine is very fragile, and the plastic filters are easily scratched and are sometimes not flat enough. However, since the introduction of metal frames (like glassless Kodachrome slide mounts, Fig. 2) gelatine filters are more practical, since if the filter becomes finger marked, it may be replaced in the frame by a new gelatine, since the frames may be used over and over. Due to their thinness, gelatine filters have little effect on the sharpness of the picture. Their cost is low and they are available in a variety of standard colors.

● **WHATEVER TYPE** of filter is used, the question of color first arises. If you



GRADUATED yellow (sky) filter is denser at the top to darken the sky without affecting the reproduction of the foreground. **FIG. 7**



NIGHT effect is obtained with Wratten No. 72 (red) filter. Same effect can be secured with No. 25 (red) filter and underexposure. **FIG. 8**



Same scene with red filter (Wratten No. 25 or "A"). **FIG. 6**



FOG scene taken with white gauze over lens. **FIG. 9**

are going to start with just one filter, the choice is definitely a medium yellow. Some medium yellow filters are the Wratten K-2, the Wratten Aero-2, or solid glass filters of similar color such as Omag Y-2, etc. Such a filter will have a multiplying factor of 2 on most panchromatic films, which simply means you double the exposure—open the lens one stop when using the filter, as from $f11$ to $f8$.

Fig. 4 shows a scene photographed without a filter. The same scene taken with an Aero-2 filter is shown in Fig. 5. Modern panchromatic film will pick up clouds fairly well without any filter, but the Aero-2 brought them out fully, yet without making the sky too dark. Note, too, the slight increase in contrast of the scene, also accomplished by the use of this filter. This property of the medium yellow filter is very useful on slightly hazy days, to bring out the sunlit effect.

If additional filters are desired, a Wratten No. 25—the well known A filter—or equivalent medium red filter is the best second choice. The effect of this filter on the same landscape is shown in Fig. 6. The clouds and the general contrast of the scene have been greatly enhanced. The effect in general, is similar to that of the yellow filter but greatly exaggerated. While unnatural, the effect is dramatic. The increase in exposure for this filter is from 4 to 8 times, depending on the film used, two or three additional lens stops, as from $f11$ to $f5.6$ or to $f4$.

Other filters which may be useful are the X-1 (light green) and the graduated yellow filter. The light green filter affects sky and clouds much the same as the medium yellow. However, scene contrast is reduced, giving additional softness when needed.

- **THE GRADUATED** filter is yellow on top, clear glass at the bottom. It serves to correct the sky, while leaving the foreground unfiltered. Its main use is with the low-priced orthochromatic films, where the filter factor for a yellow filter would be inconveniently large. The effect of a graduated filter is shown in Fig. 7. Note that the sky has about the same density as in Fig. 5, where an Aero-2 filter was used. The foreground, however, since it was photographed through the uncolored part of the filter, is light and uncorrected, similar to Fig. 1.

Since the sky is usually the brightest part of a scene, and the foreground is photographed through clear glass, the graduated filter requires no increase in exposure, either on ortho or panchromatic film.

- **SOME COLOR FILTERS** may be classified rather as effect filters. The Wratten No. 72 falls in this category. This is a very deep red filter, formerly used to a great extent to produce night effects. Today night scenes are usually photographed on infra-red film, with an



CLOSEUP without filter at $f8$. Note sharp background. FIG. 10



SAME closeup at $f2.8$ with 8x neutral filter. Note diffused background. FIG. 11

infra-red filter. However, this film is not yet available in the amateur sizes, and the No. 72 filter is still used to produce night scenes. Due to the density of this filter, underexposure will result even if the lens is wide open. However, this is exactly what we want for a night effect.

Fig. 8 shows a night scene produced with this filter on fast panchromatic film at $f/3.5$ in bright sunlight. The resemblance to moonlight is striking. However, lacking this filter, a similar effect may be obtained with a red "A" or Wratten No. 25 if the scene taken through it is heavily underexposed. Note, however, that colored costumes will photograph white, if their color is red, yellow or orange, and black if they are green or blue.

Another type of effect filter is made by mounting thin pieces of silk or gauze in frames to fit the matte box. Either the metal filter frames may be used, or cardboard ones may easily be made.

White gauze makes a *fog filter*. The density of the fog depends on how tightly woven the cloth is. A piece of white thin rayon jersey can be used mounted in a metal frame, as shown in Fig. 2.

Fig. 9 shows the scene taken through this filter, a typical "pea-soup" fog. Thinner cloth, more loosely woven, will make lighter fogs. A piece of white mosquito netting will make a light mist.

Black gauze produces a different effect, mainly a softening of the sharp lines of the picture. Gauzes are freely used for this purpose in Hollywood as well as by still photographers. Two of these, one light and one heavy, are shown in the bottom row of Fig. 3. A third one is shown, with a hole cut in the center. This is known as a diffused iris.

Fig. 12 shows a close-up without diffusion. The light is hard and brilliant, and the definition harsh and wiry. Note the pleasing softness given to this same shot by the use of a gauze in Fig. 13. No increase in exposure is necessary.



CLOSEUP taken without diffusion.

FIG. 12



DIFFUSED closeup.

FIG. 13



CLOSEUP made with diffused iris. Note increase of diffusion and darkening toward corners. FIG. 14

● The DIFFUSED IRIS when used with the lens set at a small aperture gives a picture with a sharply defined circle inside of which all detail is sharp. Outside of the circle the image is diffused. This effect is artificial and unpleasant. The correct use of the diffused iris is with a

(Page 86, please)



LIKE THE rise and fall of enormous ocean waves, sand dunes stretch toward the horizon in all directions. The barrenness of the hills is emphasized against a cloudless sky. FIG. 1



C A M E R A O N

WRITTEN AND ILLUSTRATED BY JACK POWELL

“WHAT’s a desert but an empty space, a blank, a void, a little sand and . . . nothing more?”

That’s what we may think—until suddenly we see the desert—and find a deep feeling for it that we never knew existed.

The desert was the cradle of civilization. It nurtured poets and warriors. In its oases and burning wastes, that defend Suez even now, the destiny of modern Britain may well be settled for a long time to come.

Within the boundaries of the United States there are great deserts to tempt every traveler and camera fan—immense vistas, giant closeups, pictorial scenes, and views portraying nature’s every mood. And when it comes to color, a desert sunset on Kodachrome or Dufaycolor is exciting enough to justify any number of traveling inconveniences. Right now, many de-

sert flowers are in full bloom.

Light on the desert is intensely brilliant, but different times of the day bring certain variations. Shadows vary in their depth, length, and position according as the sun moves and as the wind alters. At sundown, the light is soft, and glows with the vivid colors of the setting sun and deepening sky. A yellow or an orange filter brings out the thick, white clouds peculiar to the desert. For further exaggerating their dramatic aspect, a red filter may be used.

● **ENDLESS VARIATIONS** in composition are available. Certain rules may be followed to good advantage, for instance, the crest line of a wind-swept dune has a definite movement and this line may be utilized as the dominant source of interest (Fig. 2). Waves and



EARLY morning or late afternoon is the best time to capture the long shadows, the glint of highlights on the curving crests, and the texture of wind-rippled sand.

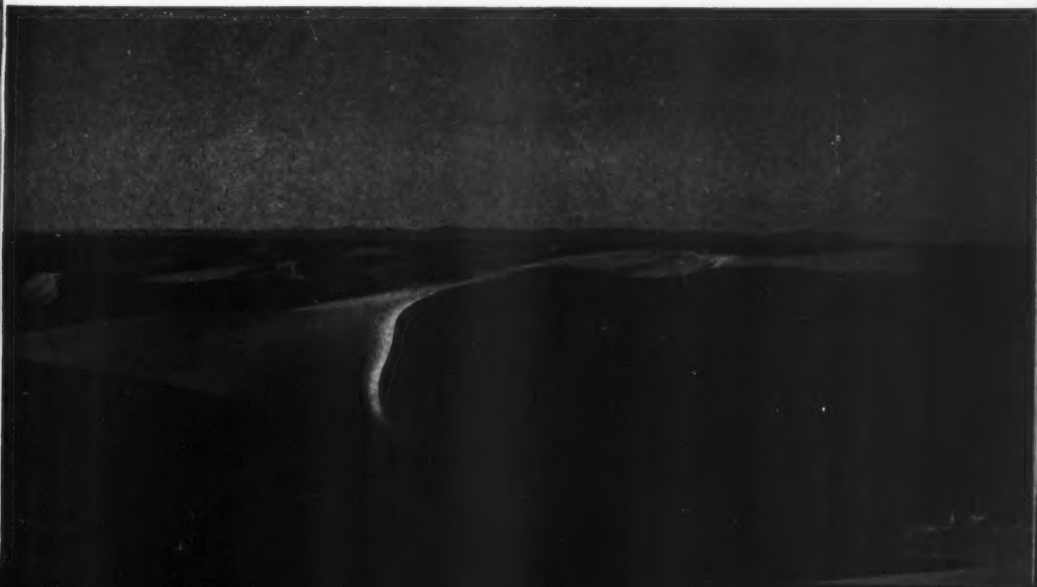
FIG. 2

T H E D E S E R T

WIND-CURVED desert dunes invite every camera from the 8x10" outfit of Edward Weston to the candid camera of the passing tourist. With such

Gargantuan subjects, the problem of focus disappears, and even the simplest fixed-focus camera can record the patterns.

FIG. 3

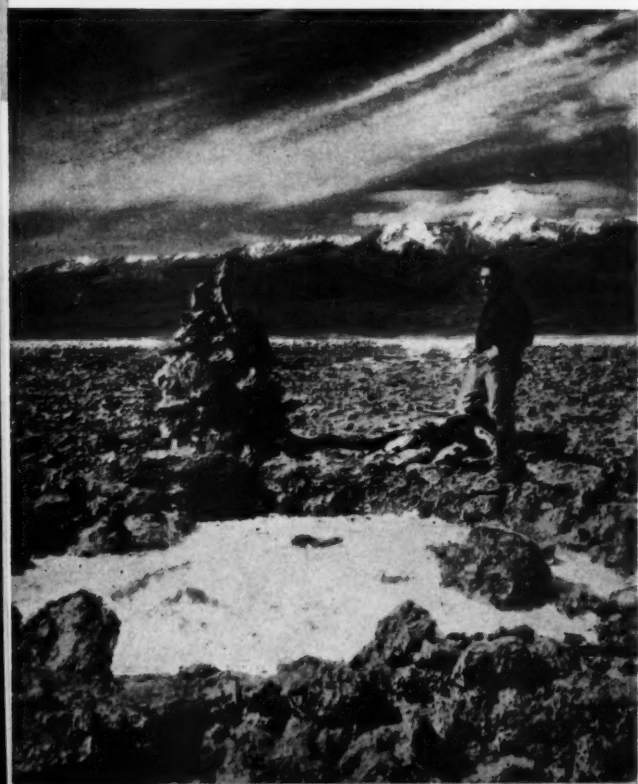




NOT ALL of the desert is sand and dunes. Patches of jagged grass grow on a large part of the area. DATA: Contax camera, wide angle lens, Panatomic X film, $f/11$, $1/125$ second, Yellow filter. FIG. 4



ADD A pith helmet to your "must" list of photographic equipment, including tripod, exposure meter, camera and lens shade. Jack Powell appears here with his outfit set up for a shot of dunes against the horizon. FIG. 5



IF YOU stare into these salt pools long enough you go blind. DATA: Contax camera, SS Pan film, wide angle lens, Green (X-1) filter, $f/8$, $1/500$ second. FIG. 6



IMPROVING on nature is sometimes necessary even with the wild, sandy subjects of the desert. The foreground dunes were made darker in this picture by prolonged printing. The horizon was

held back to carry out the effect of distance. The contrast between the dark foreground dune and the brighter areas behind it add to the massiveness of the foreground area. FIG. 7

ripples of sand, caused by the action of the wind make for interesting patterns in repetition and abstract design (Fig. 3.) Opportunities are also offered for the depiction of texture. Effective texture rendition depends on cast shadows which the desert provides in plentitude (Fig. 3 and 7.)

The loneliness of the desert may be brought out by the introduction of a figure or two in the landscape. The relative difference emphasizes the immensity of the dunes and sand spaces as compared with the human being. The figure should be rather small, thus allowing nature to predominate. Have the model walk *into* the picture and not out to one side. Nude figure studies on the desert are a popular subject with some photographers, although

one cannot help feeling a certain sympathy toward the model, considering the heat of the sand, and its roughness.

Many species of cactus and other desert growth lend interest in a picture. These, used in silhouette against a cloud streaked sky should, by virtue of repetition alone, have become a trite and tiresome subject long ago. Yet such is the charm of a simple, well planned composition employing these subjects that we continue to record and enjoy them.

A horizontal composition is especially successful in suggestion the restfulness and serenity, the long, low, sweeping lines of the desert.

- THE BEST TIME of day for color
(Page 84, please)

LOOK AT THE
PICTURES AND CHECK
YOUR ANSWERS

K A M E R A

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IN THE SUNNY Spring days ahead, many a camera that hardly saw action during the winter is going to be working its shutter off. New picture-taking problems are going to pop up. A good

many of the questions in this Kwiz, deal with picture taking and problems with camera, lens, and exposure.

Study the pictures and see if your knowledge of photography can supply the answers for these questions. One or two of them are tricky. So be careful! After checking every question, look up the correct answers given on the next page.



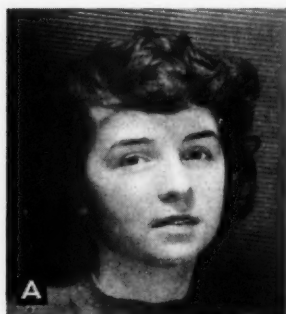
1 TWO common types of range finder show out-of-focus objects as at left. Place "A" and "B" in the squares next to their correct names: ☐ Split field. ☐ Over and under. ☐ Double image.



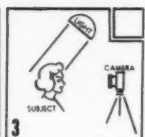
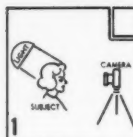
2 BOTH these pictures were taken at f4.5 with the face in sharp focus. The chair back and chair cover in "B" are sharper than in "A." A lens of longer focal length was used in "A."
☐ True. ☐ False.



3 BOTH these shots were exposed and developed exactly alike, but "B" was taken with a supplementary telephoto lens. Use of this supplementary telephoto lens produced the underexposure in "B."
☐ True. ☐ False.



4 THE position of the top light used in each of these portraits is shown in the diagrams at right, but the diagrams are in a different order. Match the pictures and diagrams, placing the letter "A," "B," or "C" in the square in the upper right-hand corner of each diagram.



K W I Z

CONDUCTED BY
VICTOR H. WASSON

TEST YOUR
PHOTOGRAPHIC
KNOWLEDGE

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ANSWERS

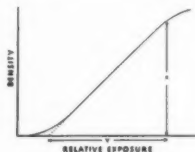
Don't peek! Check your questions before consulting these answers.

- "A" illustrates a split-field range finder; "B" the double image type.
- True. A lens of longer focal length at the same aperture shows less depth of field as in "A".
- True. The use of a supplementary telephoto lens usually requires an increased exposure.
- The halo around the head shows that print "B" was made with the top light as in diagram 1. The highlighted hair in print "C" shows it was lighted as in 2. "A" was lighted as in diagram 3.
- True. Bubbles in the glass obstruct the passage of light to a very slight degree, but do not impair the photographic usefulness of a lens.
- This is an H & D or Characteristic curve giving data on a sensitized material. The film manufacturer would find this data of most value.
- The strip on the left shows that lint was caught in the camera frame. The strip on the right shows scratches. Lint and dirt in the film track cause these. Both left and right hand strips should be marked "C". The edge fog on the center strip resulted from using an open-sided projector spool in the camera. It should be marked "A".
- Yes, in formulas for combination developer-fixers.
- The first and third prints should be marked "A", the second and fourth, "B". Note the tell-tale end of the brief case showing in the second and fourth picture, and the absence of this in the other two.

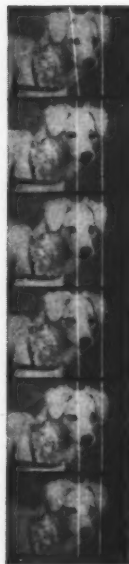
Score: 4 correct is fair; 5 correct is good; 6 correct is excellent.



- 5** THE rear element of this lens contains bubbles in the glass. These bubbles do not impair its photographic usefulness.
- ☐ True. ☐ False.



- 6** THE data given in curves such as this is of most value to manufacturers of:
- ☐ Film.
☐ Lenses.
☐ Tripods.



☐

☐

☐

- 7** THE FLAWS in these three strips of movie film were caused by careless loading. Two of the following errors produced these flaws: (A) Projection spool used in camera. (B) no light-proof leader on film. (C) Failure to clean film track. (D) Pull-down not properly engaged. Place correct letter in square under each strip.

- 8** IS THE chemical, Sodium Thiosulfate (Hypo) ever listed as a necessary ingredient in a formula used for developing film? ☐ No. ☐ Yes.



☐

☐

☐

☐

- 9** HERE ARE four prints. They were made from two negatives. Match the prints made from the same negative. (1) Negative "A" showed no apparent perspective. A straight print and a distorted enlargement from this negative are shown above. Mark "A" in the squares under these two pictures. (2) Negative "B" showed exaggerated perspective. A straight print and an enlargement in which this perspective was corrected are also shown. Mark "B" in the squares under these two pictures.

FILTERS FOR SUMMER SHOOTING

Often the use of a filter will make a real picture out of an outdoor subject in summer, where, without the filter, there would result just

another of those snapshots that never get printed. The following table suggests a number of ways in which filters can improve summer shooting:

SUBJECT	KIND OF FILM	FILTER GROUP (See Table A)	RESULTS
Any colored object or scene; landscapes; over-water views; sunsets	Panchromatic of the "ordinary" or Type B kind	2	Full color correction making tones look natural; clouds recorded, and sky correct in tone
Any colored object or scene; flowers and foliage; portraits against sky	Panchromatic of the high-speed, high-red-sensitive or Type C kind	4	Full color correction; improved face rendering in portraits
Landscapes; over-water views; sunsets; mountain scenes; gardens	Orthochromatic ("chrome" type)	2	Clouds recorded; sky improved in tone; haze reduced; foliage lightened
Landscapes; mountain and over-water views	Panchromatic	5	Sky dark and clouds emphasized; haze practically eliminated
Landscapes; mountain and over-water views; telephoto shots	Panchromatic and orthochromatic	3	Sky, water darkened; atmospheric haze decreased
Landscapes; mountain and over-water views	Panchromatic	6	Sky very dark and clouds prominent; haze almost eliminated
Landscapes; mountain and over-water views; water tanks, etc., against blue sky	Infra-red sensitive	5 or 6	Sky black and clouds prominent; foliage whitened; haze eliminated; water darkened; night and moonlight effects
Landscapes; mountain and over-water views	Panchromatic or orthochromatic	7	Atmospheric haze made prominent; sky lightened
Landscapes; mountain and over-water views	Panchromatic or orthochromatic	1	Haze reduced; sky improved
Landscapes; buildings and figures against sky	Panchromatic or orthochromatic	8	Darkens sky; maximum darkness when used with yellow or red filter
Landscapes; buildings and figures against sky	Orthochromatic	2 and 8 together	Very dark sky
Sand dunes, seashore in sunlight	Panchromatic	3 or 5	Better sand texture than without filter
Sunsets	Panchromatic	3 or 5	Improves contrast
Architectural	Panchromatic	3	Sky darkened. Texture of walls, etc., improved
Distant views; certain over-water views; shots on cloudy days	Kodachrome, Regular	10	Prevents excessive blueness
Any daylight subject	Kodachrome, Type A	9	Corrects for daylight; reduces haze in distant views
Outdoor scene in shade; sky overcast	Kodachrome, Professional daylight type	10	Produces slightly warmer colors
Mountain views; distant landscapes; blue-sky-lighted scenes in shade; air shots from high altitude	Kodachrome, Professional daylight type	11	Reduces blueness
Any daylight scene	Kodachrome, Professional Type B	12	Corrects for daylight
Scenes showing blue sky	Kodachrome, Regular or Daylight; Type A or B with suitable filter	8	Makes sky deeper blue

TABLE A

TYPES OF FILTERS

GROUP No.	GENERAL DESCRIPTION	EXAMPLE
1	Ultraviolet-absorbing	Any "U-V" or haze filter
2	Medium yellow color-correction filter	Wratten K-2, Kodak Color Filter
3	Deep yellow or orange contrast filter	Wratten G
4	Yellow-green color-correction	Wratten XI
5	Tri-color red	Wratten A
6	Contrast red	Wratten F
7	Blue	Wratten C5
8	Polarizing screen	Kodak Pola-Screen
9	Color-film filter for daylight	Type A Kodachrome Daylight Filter, Wratten 85
10	Color-film haze filter	Kodachrome haze filter, Wratten I
11	Color-film haze filter	Wratten 2A
12	Kodachrome filter for daylight	Wratten 85B

PHOTO DATA

CLIP SHEET FOR PERMANENT REFERENCE

MINICAM
PHOTOGRAPHY

EFFECTIVE APERTURE FOR VARIOUS FILTER FACTORS,

APERTURE WITHOUT FILTER	FILTER FACTORS									
	1.2	1.3	1.4	1.5	1.6	1.8	2	2.5	3	4
APERTURE (f-NUMBER) TO USE WITH FILTER										
f1.5.....	1.4	1.75	1.7	1.6	1.58	1.5	1.4	1.5	1.4	1.3
f2.....	1.8	2.2	2.1	2	1.9	1.8	1.7	1.5	1.4	1.3
f2.5.....	2.3	3.2	2.9	2.8	2.7	2.6	2.5	2.2	2	1.8
f3.....	3.2	3.5	3.4	3.3	3.2	3	2.8	2.5	2.3	2.1
f4.....	3.6	4	3.8	3.7	3.5	3.3	3.2	2.8	2.6	2.2
f4.5.....	4.1	4.9	4.7	4.6	4.4	4.1	4	3.5	3.2	2.8
f5.....	5.1	5.5	5.3	5.1	5	4.7	4.5	4	3.5	3.1
f5.6.....	5.7	6.7	6.7	6.5	6.3	6	5.6	5	4.6	4
f6.3.....	7.3	7.9	7.6	7.3	7.1	6.7	6.4	5.8	5.2	4.5
f8.....	8.2	9.8	9.3	9	8.8	8.2	7.8	7	6.3	5.5
f9.....	10	10.5	10	9.8	9.5	9	8.5	7.6	6.9	6
f11.....	11	14	13.5	13	12.5	12	11.3	10.1	9.2	8
f12.....	14.5	15.8	15.2	14.7	14.2	13.4	12.7	11.4	10.4	9
f16.....	16.5	20	18.5	18	17.4	16.4	15.5	14	12.7	11
f18.....	29	28	27	26	25.2	23.8	22.6	20	18.5	16
f22.....										
f32.....										

FILTER COMPENSATING TABLE

When using a color filter over a camera lens, it is usually necessary to increase exposure time to compensate for light lost by absorption in the filter. One way of doing this is to *open the lens diaphragm wider*. For some filters the factor is one or two full stops and it is easy to make this adjustment. But when the factor is an odd number such as

1½ times, then it is necessary to consult a table to be sure of accurate results. The above table shows where to set the diaphragm when the exposure *without* a filter is known for a certain aperture. The shutter speed remains constant.

Example: The exposure without a filter is 1/50 second at f8. A filter having a factor of 1.6 (requiring 1.6 times the exposure that

would be needed without it) is put on the lens. Referring to the table, you find that f8 and a factor of 1.6 require a diaphragm setting of f6.3. Thus, with the filter, the exposure would be 1/50 second at f6.3.

If the f-value listed is not found on the camera, you can estimate closely enough, or use the nearest marked aperture. That is, if the table indicates f5.1, use f5.



● "BEING Your SNAPSHOTS AND

THE Old Photo Gaffer's invitation has been lavishly accepted. Readers are sending in lots of prints for scrutiny and comment. Very well, without further delay, let's get at them.

● "MORE!" by C. L. J., Cincinnati, O.



"MORE." DATA: Korelle Reflex camera, Agfa Superpan Supreme film, $f/22$, open-flash with Wabash No. 0 at 8 ft., print on Halobrome.

A baby, of course, is the whole world's favorite camera subject. And very properly. Babies are soft, delightful things, even when their faces are all smeared with pablum. So—let's all, here and now, resolve never, to blaze away,

point blank, at any baby, especially with a flash camera. For, unless the flash is disconnected and used at an angle, the result is harsh, flat, and usually quite unfair to the infant. Avoid direct front lighting for most subjects. For babies, avoid it as avidly as you know how.

● "ON THE STAIR," by W. Z., St. Paul, Minn. In its basic design, there's a good picture here, with a well-defined "Z" composition. The difficulty, the factor which keeps it from being as good a job as its maker hoped for, is that the lighting simply isn't crisp enough, clean enough to capitalize on the material. Right here is a good place to emphasize the fact that the fastest film and lens cannot be made to substitute for good light.

True, fast film and a fast lens will give you a picture under adverse lighting conditions, but no film or lens can give you any brilliance, sparkle, and vitality if the light isn't right. The obvious and reasonable thing to do is to match your picture making to your light conditions. Another word about this picture: the placement of the



"ON THE stair." DATA: Eastman Super-XX film, $f/4$, $1/100$ second. Dull cloudy daylight.



"LOOKING up." DATA: Foth Derby camera, Agfa Superpan film, Yellow (K-2) filter, $f/4.5$, $1/100$ second, negative developed in Edwal 12, print on Defender glossy.

CRITICAL"

HOW TO BETTER THEM



figure on the steps might have been improved if the woman had been nearer either the bottom or the top of the stair. As it is, she's perilously close to the static center.

● "LOOKING UP," by R. B., Brooklyn, N. Y. Here's a good example of a type of picture which has survived from the days when any "angle" picture was assumed to be a good picture. It has survived because it has more than a merely unorthodox angle to offer. It is typical of what millions of city folks glimpse, hastily, as they scramble between "L" pillars, trucks, and taxis. This particular shot would be, to me, more enjoyable if it were cropped so that the building was vertical, instead of vertiginous. The data with the



"GIRL AT Crater Lake." DATA: Super-XX film, Yellow (K-2) filter, $f/22$, $1/25$ second.

picture says that a K-2 filter was used, but there's no suggestion of filter-effect in the sky. I suspect the filter was nullified by a touch of over-exposure. In the actual print, there's a lot of detail on the under side of the "L" structure—detail that isn't needed and which suggests, again, an exposure on the over side.



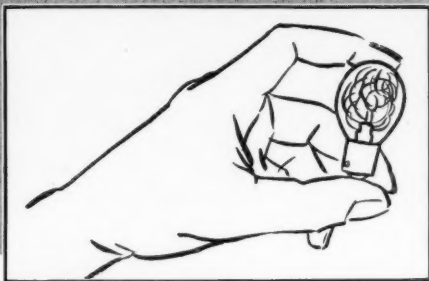
"LIFE'S twilight." DATA: 6.5x9cm. Bee Bee camera, $f/11$, $1/100$ second. Print on glossy bromide.

● "LIFE'S TWILIGHT," by D. C., Houston, Texas. Portraits of oldsters are photographically interesting because there's nothing like a camera for catching the complex lines, the character etchings, the patina of age. But it's not wise to handicap such pictures by making them in the sun-spotted shade of a tree. Lighting of that sort puts emphasis where it doesn't belong; everything is accidental. When you have as fine a subject as this, let him "shine" for you; don't drown him in meaningless shade. By this I don't mean that you should pose him in full sunlight; open shade, unadorned with sun spots, should give you better results and permit you to establish your exposure without worrying about those brilliant spots of sunlight.

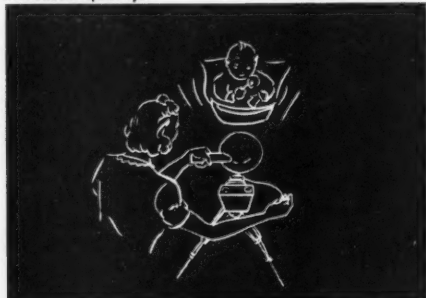
● "GIRL AT CRATER LAKE," is one of those vacation shots that looks like a sure-fire winner when seen in the view-

(Page 88, please)

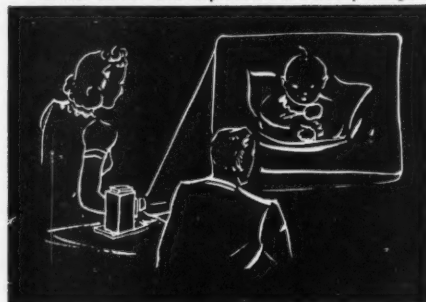
Flash



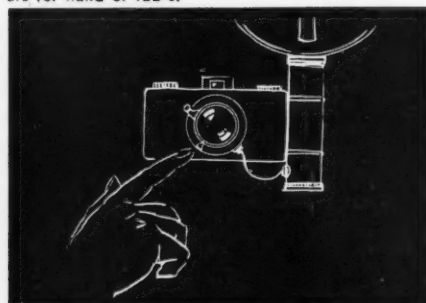
1 ONE LITTLE flash bulb may be "just what the doctor ordered" to give your color shots that increased quality.



2 FLASH gives good color rendition of flesh tones. Normal action and expression are easily caught.



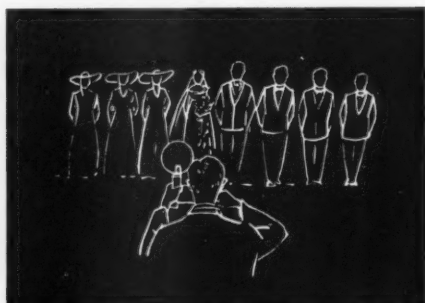
3 COLOR transparencies are best seen when projected to life size. Also there are low cost viewers for hand or table.



4 CORRECT exposure for color is simple with flash lamps. Flash numbers are given on page 66.

HIS FIRST ROLL of color film has made many a picture-taker feel that he was right back in the old-time box camera class . . . unable to take pictures anywhere except outdoors in full sunshine. Average exposures in full midsummer sunshine run $1/50$ of a second at $f5.6$. This, topped by the necessity for getting exposure exactly right within $\frac{3}{4}$ of a diaphragm opening, plus or minus, has brought disappointment to many who felt that it put too much limitation on the things they could picture with their equipment.

Yet good color pictures are made at high shutter speeds . . . even up to $1/1000$ of a second. Ardent amateur photographers are getting sparkling color shots at reasonably small stop openings, indoors at night, outdoors at night. They are taking pictures of the intimate, everyday things that interest them: their favorite pets in action, lively children, the inside of their homes and places of business, parties, weddings and the myriad of other things that they have learned to catch on film in their experience with black and white materials. Photoflash is the answer.



5 ONE bulb right at the camera gives "flat" lighting. The result emphasizes color contrasts.

FOR YOUR *Color* PICTURES

HOW TO GET THAT ADDED DEPTH, SPARKLE AND LIFE IN YOUR KODACHROME COLOR SHOTS

WRITTEN AND ILLUSTRATED BY DON MOHLER

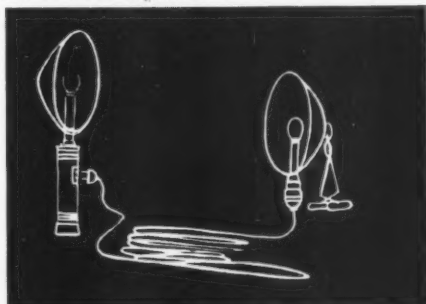
The whole field of color photography is opened wide by the use of the flash lamp . . . by meeting its two main difficulties: It gives *plenty of light* for most picture-taking purposes, even at fast shutter speeds. It *makes correct exposure simple* and reliable because the flash bulb itself is a "package of light" of known, uniform intensity.

The color of the light from a regular photoflash lamp is uniform. Used with the proper film, no filter is necessary and the color values will be fully as good as outdoors in the sunshine. They will be less variable, in fact, because daylight changes in color constantly. It is seldom the same from hour to hour. Early and late in the day it is too red and yellow. In the shade it may pick up too much green from lawn and trees. When the sky is overcast it may be too blue. The color of light from photoflash bulbs, however, is carefully held within narrow limits by control in manufacture.

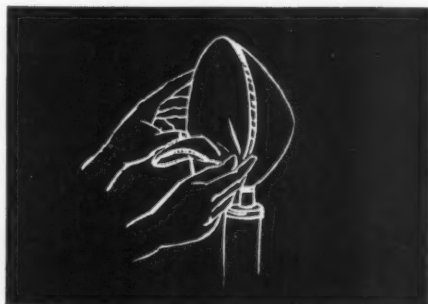
The manufacture of Kodachrome film is carefully controlled to keep the color response within narrow limits. Type "A" is made to give its best results with photo-



7 WITH A synchronizer, the fullest use can be made of color flash for action shots. Snapshots can be made anywhere.



8 BY MEANS of an extension cord and a sidelite reflector, two lamps may be flashed together on "open-shut" flash or with a synchronizer. This makes "studio" lighting easy with handheld equipment.



6 AN OILED silk, or plicofilm, dish cover makes a good flash diffuser. For color photography, it must be clear, or very pale amber.



9 MUCH can be learned from exposing a single "test" roll of film. Two-lamp shots are especially interesting and instructive.

flash and photoflood light. The combination of Type "A" Kodachrome and photoflash light for exposure produces superb color pictures . . . pictures that stand the severest test: good rendition of flesh tones.

KODACHROME FLASH NUMBERS

Tables for G-E and Westinghouse
Photoflash Lamps

THE FLASH NUMBER exposure guide below gives correct aperture at any distance. Divide the FLASH NUMBER by distance from lamp to subject. For example, with Kodachrome Type A (which is the amateur roll film for indoor use) and one No. 11-A lamp, at 1/100 second, the FLASH NUMBER is given as 60. (See table below for Photoflash 11-A.) If you are shooting at 10 feet, 60 divided by 10 equals 6. Use f6. Set lens between f5.6 and f6.3, or at closest calibrated stop.

Exposure recommendations are based on the use of flash lamps in good metal reflectors indoors in an average-sized room with medium-colored walls and ceiling.

The numbers are given as issued by the General Electric Co. In each case, the Flash Number given for 1/50 second may also be used at 1/25 second, or on Time or Bulb for an Open-Shut flash shot.

Numbers given for 1/400 second also are valid for 1/500. Numbers given for 1/200 may be used at 1/250.

PHOTOFASH 11A		
	Shutter Speed	Flash Number
KODACHROME TYPE A	1/50	78
	1/100	60
	1/200	30
	1/400	15
KODACHROME TYPE B	1/50	55
	1/100	44
	1/200	35
	1/400	25

PHOTOFASH 16A		
	Shutter Speed	Flash Number
KODACHROME TYPE A	1/50	113
	1/100	88
	1/200	70
	1/400	50
KODACHROME TYPE B	1/50	80
	1/100	62
	1/200	50
	1/400	35

The above tables are based on the use of average reflectors as furnished with synchronizers.

PHOTOFASH 5		
	Shutter Speed	Flash Number
KODACHROME TYPE A	1/50	100
	1/100	78
	1/200	60
	1/400	44
KODACHROME TYPE B	1/50	70
	1/100	55
	1/200	44
	1/400	30

PHOTOFASH 5M		
	Shutter Speed	Flash Number
KODACHROME TYPE A	1/50	42
	1/100	42
	1/200	34
	1/400	27
KODACHROME TYPE B	1/50	30
	1/100	30
	1/200	24
	1/400	19

The above tables are based on the use of reflectors especially designed for midjet lamps.

● IN ANY BRANCH of photography, it is possible to go into extreme technical detail in exploring and explaining all the factors that have an effect on the final result. That is not the purpose of this article. Rather, it is intended that we get right at the result . . . some good pictures . . . in the most direct way. Once stimulated by the effectiveness of color film with even the most everyday subject matter (once, for example, he has seen a life-sized image of a charming child or an esteemed pet projected on a screen in full living color) the camera fan can find plenty in the existing literature on color photography to inform him and satisfy his special interest.

Exposure can be by the "open-shut" method. The camera is placed on a solid support and set for "bulb" or "time." When ready . . . the shutter is opened and kept open while the lamp is flashed . . . then closed. In this way, with no equipment except a lamp cord and reflector, it is possible to take all types of color pictures except daylight flashes and those with rapid motion.

With a synchronizer on the camera, the fullest possible use can be made of all the advantages of photoflash photography . . . in black and white as well as in color. A synchronizer is a device which automatically assures that the shutter is wide open right at the peak of the flash, at any shutter speed. The camera can be hand held. Reflector and lamp are right at the camera. The photographer knows that whatever falls within the view of his camera lens is also fully illuminated by the flash.

By means of an extension cord of No. 18 or heavier wire, with another reflector at the end of it . . . two flash bulbs may be flashed simultaneously, in perfect synchronization. Modern synchronizers have provision for plugging in a sidelighting unit. With one lamp at the camera, and another on the extension, the variety of lighting effects possible is almost unlimited.

(Page 100, please)

NOW

General Electric brings you the FOCAL-PLANE Midget

G-E MAZDA Photoflash lamp No. SIX
TO JOIN THE NEW SPEED MIDGET AND
SENSATIONAL G-E No. 5



15¢
LIST

Here's a midget "tailor-made" for focal-plane

... It's the ideal flash bulb for all but the largest focal-plane cameras . . . midget G-E MAZDA Photoflash lamp No. SIX

You get plenty of light. Use G-E No. SIX in the new concentrating reflectors and you can equal the performance of larger lamps.

Extra long flash duration plus precision timing assures positive synchronization with uniform density over the whole negative.

Walnut-size brings you sensational midget CONVENIENCE.

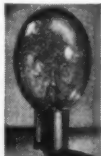
Flash shot after shot in quick succession . . . for you can carry up to 30 lamps in one pocket. You are always ready for prize flash shots.

Bayonet-base speeds bulb changing . . . assures positive contact. It flashes on three volts.

Get a supply of these new Focal-Plane Midgets (look for the word "SIX" on the end of the lamp) . . . and begin to enjoy a new thrill from flash photography!

**3 HITS
IN A ROW!**

G-E Focal-Plane Midget
... specifically designed for curtain-shutter synchronization.



The new SPEED Midget

... G-E MAZDA lamp SM. It's a knockout for action close-ups. Because it peaks 4 times faster, it requires synchronization adjustment or new equipment.



The G-E MIGHTY Midget

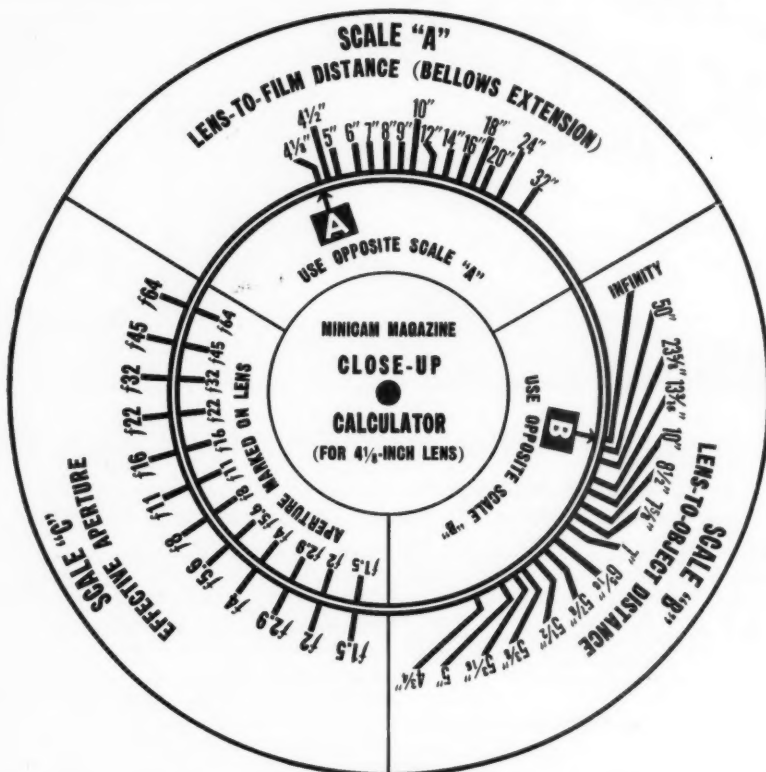
... G-E No. 5... for front shutter synchronization. Press photographers say there's no better all 'round lamp. Try it and you'll always keep a supply



GENERAL  ELECTRIC
MAZDA PHOTOFLASH LAMPS

MINICAM'S *Calculator* DIAL

READY FOR USE—SIMPLY CUT OUT AND PASTE ON CARDBOARD



CLOSE-UP CALCULATOR FOR USE WITH LENSES OF 4 1/8-INCH (10.5 CM.) FOCAL LENGTH

THIS CALCULATOR DIAL indicates the changes in effective aperture when a 4 1/8-inch (10.5 cm.) lens is used at distances of 50 inches or less from the object. It also shows the distance at which to place the camera lens from the object to bring it into sharp focus for a given bellows extension (lens-to-film distance).

A Close-up calculator for use with 2-inch (50 mm.) lenses at distances between 34 inches and 6 inches from the object will appear in the June issue of MINICAM PHOTOGRAPHY.

• THE FOLLOWING examples illustrate some of the uses of the calculator:

PROBLEM: A small object is to be photographed.
(Page 95, please)

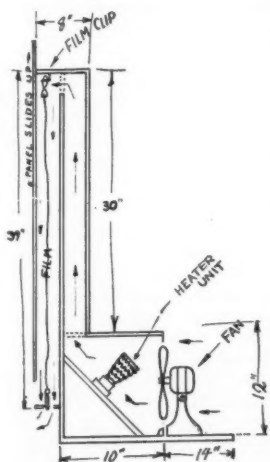
GADGET-HINTS AND SHORT CUTS

Film-Drying Cabinet

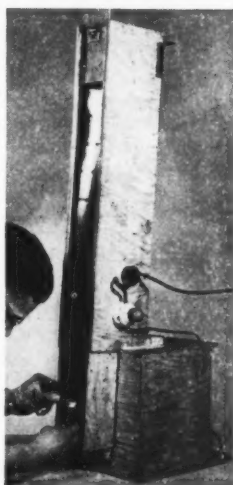
An efficient, home-made apparatus for drying roll film negatives safely in less than 10 minutes is made from a small electric fan, an ordinary element such as is used in radiant heaters, and a plywood cabinet (see Fig. 1).

The construction details are shown in Fig. 2 for a dryer that takes 120-size roll film. The dimensions of the cabinet containing the heating element (Fig. 3) are determined by the type of fan used.

The base of the dryer is of 1" material and the flue for directing the warm air around the film is of plywood. The double-column arrangement is to dry the film from the top down, so that water drops will not fall on dry parts of the roll, as that would cause water spots.



CONSTRUCTION details of dryer that takes 120-size roll film.

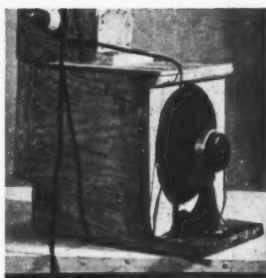


FILM DRYER in use, showing roll of negatives being clipped in place. FIG. 1

To blow air down across the film without the back flue would slow down the air flow (on account of the opposition of the natural draft) and might overheat the film, as a result of the slower circulation

and increased proximity of the heating element.

The heating unit is of the screw-in type, about 600 watts. The switch on the side operates the fan, heater, and a red pilot light that indicates whether the device is in operation. — *Ralph Haburton.*



CABINET with heating element and fan in position. FIG. 3

Mirror Shows Enlarger Stops

A small mirror placed on the safety filter of your enlarger (Fig. 1) permits easy adjustment of the diaphragm of the enlarger lens. When these stop markings are on the front of the lens it often is necessary to "stand on your head" to stop down the lens accurately without some such attachment.

Cut the desired piece from a small pocket mirror. Then cut a piece of cardboard the same size and fasten it to the back of the mirror with tape around the edges. Bend a small piece of thin metal as shown in Fig. 2 and fasten it with "liquid solder" to the cardboard-backed mirror.

Place this unit on the enlarger filter and move it around until it reflects the lens aperture markings without interfering with passage of light through the filter. This position is found by bending the metal to different angles. Fasten the mirror in place with "liquid solder" or a rivet or bolt.

After focusing with the lens wide open, the mirror permits closing down to any desired stop by watching the reflection in the mirror.—*L. T. Beggs, Cleveland, Ohio.*

(more on page 105)




MIRROR in position on enlarger's red safety filter. FIG. 1



Inside HOLLYWOOD

By MICHEL JACOBY



WITH vast research facilities at its command, the Hollywood motion picture studios are always experimenting with some radical idea or other. One of the biggest studios is reported to have developed a new type of flash bulb which can be used repeatedly, for 250 flash shots.

Repetitive flash bulbs have been tried before, but one still has to be manufactured which can be synchronized with high-speed shutters and this one is said to be the answer though we haven't seen it yet and we're just as skeptical as the next snap-happy shutter-bug.

The energizing element is uranium in a gaseous form. One chemist we broached on it declares flatly it's impossible, admits that there's plenty yet to be learned about this mysterious mineral and if the flash element were a uranium by-product the chances are it would likely blow the photographer to Kingdom Come, but then Hollywood's always trying the impossible.

Already we have GE's new SM photoflash bulb, a little gas-filled item, non-repetitive, but with new characteristics. That's another item we'll have to try before passing judgment.

● **HENRY FONDA'S** secret passion is the black art of photography. The new house he's just built has a dream darkroom, air-conditioning, water-temperature control and all . . . Hymie Fink, *Photoplay's* nocturnal camera-hound, and *Life Magazine's* Carl Mydans, the chunky camera-hero of the Finnish War, have both discarded Contaxes for Super Ikonta B's (2 1/4 x 2 1/4") . . . Mischa Auer has got himself a new Rolleiflex, will shoot anything on sight, but is a penny-pincher when it comes to enlargements, using proof-paper . . . Warren Williams is torn between two loves, a fully-equipped tool-shop and a well-outfitted darkroom which he's built into his ranch house at San Fernando Valley.

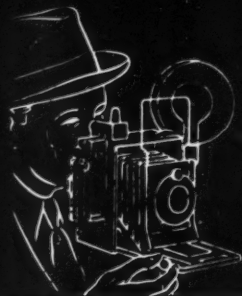
● **THE NEW** miracle chemical, "Aerosol," has taken Hollywood by storm. It's THE way to get clean and spotless negatives. We've tried it and we're sold. It's prophesied that, like metol and hydroquinone, it'll be a basic photographic chemical.

Surprising the way it does away with the old bugaboo of pinholes, comforts us in the knowledge that when we dunk our prints in a hypo bath containing the stuff the prints are fixed thoroughly in half the usual time and we've hung up 8 x 10" negs dripping with our notoriously hard Hollywood wash water and they've dried with nary a water spot. The Technicolor lab is the biggest user of Aerosol, taking five gallons a month. That's something when you know that one ounce is all the average amateur can use in a year, it's that powerful.

● **OUR DOCTOR**, J. M. Andrews, is one physician who, when he's not wielding a scalpel or writing out prescriptions for pills, is to be found in his darkroom. He has worked out a clever method of handling 16 x 20 prints, which he makes periodically. He has a spot for a big picture over his fireplace and likes a frequent change of scene. But having a small, compact darkroom doesn't stop him from making the big ones.

He does it all in a single 16 x 20 tray which he sets up in his darkroom sink on an angle, easel fashion. After taking a reading with his Haynes Meter, he shoots the print, places it in the tray and proceeds to sponge it with developer, saturating the emulsion surface rapidly and evenly, continuing the sponging operation until the print is fully developed, then bringing a sponge loaded with stop-bath into play, followed by a hypo rinse in the same fashion. With one finished, he rolls it up and lays it aside, makes another one or two and then dunks the batch in the same tray filled with a gallon of fresh hypo, after which the customary washing and drying.

● **AS A PUBLICITY** gag Binnie Barnes was posed recently shooting a Miniature Speed Graphic, though she didn't know how to handle it. Intrigued by the instrument, she went out and bought one the other day. Now she's a rabid amateur . . . Gene Lester is the photographer who glorifies the Earl Carroll Beauties locally . . . Swell gag line they coined for a shot of the balding Carroll . . . line is: For Whom the Belles Toil . . . Ted Marquis, one of the better professionals, has an interesting hobby: cloud photographs. Ted says under-expose cloud shots and overdevelop them for best results . . . William Mortensen has shelved his English Soho View Camera and now swears by an American Series D Graflex with revolving back . . . He burns up more negatives on one picture than ten average photographers. Hollywood idolizes him. Each time he writes a piece for a magazine it's a complete sell-out locally. Moral: Local boy can make good in his own home town.



BEHIND THE NEWS CAMERA

By A. J. EZICKSON, Telephoto Picture Editor, Times-Wide World

• **THE CHICAGO** Press Photographers Association, which boasts 65 members, has two classes. Active membership is limited to staff photographers working the metropolitan dailies, picture syndicates and newsreels. Associate membership is available to local photographic department employees and to photographers and photographic department employees working on newspapers outside the city limits.



Special credentials, such as the badge herewith shown, have been approved by the Mayor and the Chief of Police. Cards

which the photographers are allowed to display prominently on their automobiles have been authorized by the Chicago Police Department, the Governor of Illinois and the State Police.

Aside from this protective feature (and an important one since the widespread abuse of the regulation police cards), the association also offers educational and recreational advantages. The officers are: President, Tom Howard of Chicago Times; three Vice Presidents: Fred Fellingner, Paramount News; Russell Hamm, Chicago Daily News; and Weston Haynes, Associated Press Photos; Secretary and Treasurer, Louis Okmin, Chicago Times.

• **AN IRONIC** Twist To a News Snap. Lee Moyné Marks, photographer for the Davenport, Ia., *Democrat*, paid a real price for a "break" on news pictures. When a car crashed into two gasoline pumps at a filling station, Marks shot pictures of the pumps and two cars which also burned up. One was his own.

• **THE GERMAN** Government has confiscated and transported to Berlin the entire library of news photographs of the New York Times Wide World Photos Service in Paris, Washington officials revealed recently. The Wide World office was operated by *The New York Times Societe Anonyme*, owned by The New York Times Company of New York. The Germans had previously seized the premises and property located at 37 Rue Caumartin on the allegation that it was a French company. The collection, a valuable accumulation of hundreds of thousands of pictures of important news events in Europe covering a period of some twenty years, was

taken from the Wide World office in Rue Caumartin on November 18. The German officials gave no receipt for the pictures despite persistent attempts to obtain one, and the confiscation was accompanied by no explanation. It is to be noted that even should the pictures be returned, they may be copied in Berlin in the meantime.

• **NEARLY EVERY** news cameraman in London has had a close brush with death. There's Joseph Wurzel, for instance. He's a 20-year veteran in the profession and for the last nine years has been manager of Associated Press Photos in London. Wurzel, with Hugh Wagon and Milo M. Thompson, Associated Press correspondent, and Mrs. Thompson, were returning to the city from the suburbs. Unable to reach their destination before dark, they were caught in a night raid. As they approached an intersection, the green traffic light went out and the amber came on. They elected to speed on before the red light showed. A block further on the red light stopped them, and at the moment two bombs came screaming down.

Mrs. Thompson slid off the seat and buried her face in the cushion. Her husband scrunched in the corner to get away from the window glass. Wurzel and Wagon ducked. One of the bombs took away three-quarters of the roadway at the very spot where they should have been waiting for the light to change.

A few days later, Wurzel again had another narrow escape from death. He and his wife were in the little brick shelter in their suburban garden when a bomb landed only 12 yards away. The whole shelter leaped into the air and settled back again. Nearby houses, including their own, were damaged. Except for the shock to their nerves, they were unharmed.

• **SERVING UNCLE SAM!** Phil Dittes, of the Minneapolis *Tribune* photographic staff, has been called to military service . . . John Bardwell, Washington *News* staff cameraman, and Grant Anderson, member *Acme* telephoto staff in Washington, have both enlisted and are now with the 121st Engineers and are stationed at Fort Meade, Maryland . . . Carrolle Myett, Boston *Record-American* photographer, has been inducted at Camp Edwards, Mass . . . George Shivers, Philadelphia *Record* cameraman, has been called up for a year's military training under the Selective Service Act.



By J. H. SAMMIS, A.R.P.S.

SPRING SONG (Mendelssohn?).

Roses are red,
Violets are blue,
Turtles will come out of their winter hibernation
and start snapping,
Will you?

And speaking of Spring, how about getting out the old box and giving the bellows an inspection with a penlight flashlight? Run it up and down the inside edges of the bellows—and don't forget to do it in the dark of a closet where you have waited a minute for your pupils to dilate; for better seeing, Grandma.

AN UNSUCCESSFUL PHOTOGRAPHIC APPROACH

Snap?

Slap!

WHAT WON'T THEY THINK OF NEXT?

The neophyte's first look at a reflex camera image "My, and it's in COLOR, too!"

SOMETHING TO TRY: Take some Spring and Summer landscapes with a rapid rectilinear lens on your Graphic or view camera in place of your usual anastigmat—you'll be surprised (and we think, pleased) with the not too hair-line results. You might use a blue filter to ADD haze and atmosphere. Or hold a piece of cellophane that has been crumpled and flattened across the front of the lens for softness. There you are, a pictorialist—and not bad, either!

In Europe even the film speeds are rated in din.

Windy Day Photo Technique

Looking twice

Isn't nice.

This Month's Smile: As incongruous as a deckle edge on an f:64 glossy.

ADVICE AGAINST 16mm. CONTACT PRINTS

Undersized prints
Cause undisguised squints.

ADVICE TO A FASHION PHOTOGRAPHER ABOUT TO HIRE A MODEL

Better be skippy
If they're hippy!

THEY CAN'T HAVE EVERYTHING: Many a model with a face that would stop a darkroom timer also has a figure that would stop traffic.

NOTE ON REDUCERS: Some models keep earning their bread and butter by never eating any.

No, Lady, stopping down the diaphragm is not a health exercise.

QUIVER BLUES

A young cine fan from McTwitters,
(Good film and much time he fritters),
His shots have the shakes,
He pans fast on the takes,
Now his friends have the cinegraph jitters.

THIS MONTH'S DEFINITION:

Density—that which the other fellow has when he won't agree with you.

USEFUL SPOTTING OUTFIT:

(1) No. 1 sable brush, (2) a pan of white water color, (3) a pan of black water color or a stick of India ink, (4) a dime's worth of Arabic to mix with color when lustre is wanted on the spot.

ACROSS THE COUNTER

1st Camshop Clerk (about an overtalkative customer who has just left) "Boy, he sure was full of stories today."

2nd Camshop Clerk: "What do you mean, 'today'?"

3rd Camshop Clerk: "What do you mean, 'stories'?"

IDLE QUERY: Why haven't more gum process workers stuck to their work?

ODE TO PORTRAITURE

The Δ is stable,

The S-curve full of grace,

The verticals are stately,

While obliques suggest a race.

Radiants have their foci,

And patterns look like lace;

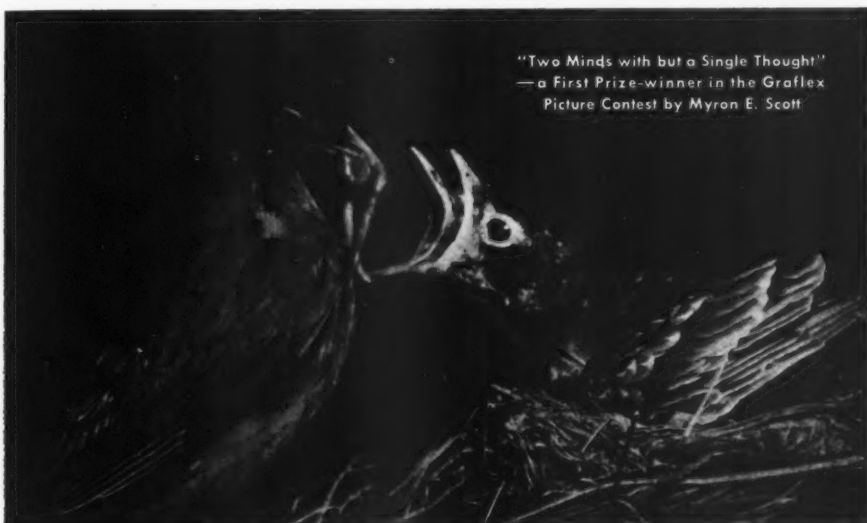
Aw, what the devil, Hillary,

Let's just photograph a face!

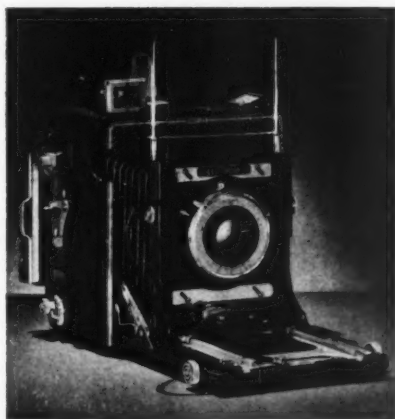
INFAMOUS LAST LINE: "Oh, then a full scale print has nothing to do with weights and balances?"



This Early Bird Got the Worm... **SPEED GRAPHIC Got the Picture!**



"Two Minds with but a Single Thought!"
—a First Prize-winner in the Graflex
Picture Contest by Myron E. Scott



FOLLOW the lead of prize-winning photographers — make sure of your picture by taking it with a Speed Graphic. Mr. Scott shot *his* prize-winner with a $3\frac{1}{4} \times 4\frac{1}{4}$ Speed Graphic at 1/100 second and $f/16$ using natural light plus one 100-watt lamp. For all-around picture-making day or night, this camera is "tops." Anniversary models available in two sizes: $3\frac{1}{4} \times 4\frac{1}{4}$ and 4×5 . Either with American-made Kodak Ektar $f/4.7$ lens in Supermatic shutter is **\$123.50**. Down payment through your Dealer as little as **\$25.50**. Help yourself to better pictures with "Graphic Graflex Photography"—only **\$4.00** at your Dealer's . . . When in New York City, Rochester or Los Angeles you are cordially invited to visit the Graflex Display Rooms.



New FREE Catalog for You!

Get it at your Dealer's or from us. Paste coupon—or write your request—on penny post card, if you wish. Folmer Graflex Corporation, Department MC-26, Rochester, New York, U. S. A. (Western Division: 3045 Wilshire Blvd., Los Angeles.)

FOLMER GRAFLEX CORPORATION
DEPT. MC-26, ROCHESTER, N. Y., U. S. A.
Please send me your new free catalog of
Graflex and Speed Graphic American-made,
Prize-Winning Products.

NAME _____
ADDRESS _____
CITY _____ STATE _____



PRODUCTS

G-E Speed Midget (SM) Photoflash Lamp

The G-E Mazda Speed Midget Photoflash Lamp SM (13c each) produces a flash brief enough to freeze moderate motion and fast enough to simplify synchronization. Unlike other types of flash lamps, the SM employs no aluminum leaf, free wire, or shredded foil within the bulb. Instead, a small amount of chemical paste applied to the ends of the lead-in wires (in an atmosphere of oxygen) produces the SM's rapid flash.

The SM is the same shape and size as the G-E No. 5, but the SM comes to peak of flash in 1/200 second, four times faster than the No. 5's flash or that of any other G-E synchro-press lamp. The entire flash lasts only 1/100 second. The new source produces only about 1/4 as much light as the No. 5, but this is ample if high speed film is used.

Human and animal subjects photographed by the SM appear to be less aware of its mild flash of short duration than they are of flashes produced by other types of lamp.

The SM's quick flash makes possible the use of relatively simple synchronizers, designed to take pictures by open-flash. Thus nearly all of the SM's relatively low light output is used. The new lamp may also be used in synchronism at high shutter speeds. It is easily synchronized with almost all types of manually setting shutters.

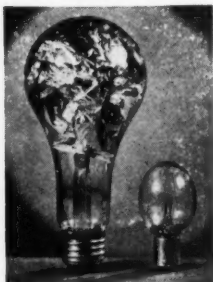
The SM lamp, in an efficient reflector, can be used with a box camera loaded with highest speed film to take good pictures of moving objects at distances of 7 to 8 feet. Cameras having faster lenses produce good results from the same subjects at distances of 20 feet or more. The lamp is also good for taking extreme close-ups.

Made by General Electric Co., Nela Park, Cleveland, Ohio.

Kalart Compak Works with Speed Midget Bulb

The Kalart Compak Passive Speed Flash (\$6.95, complete) synchronizes the G. E. SM (Speed Midget) photoflash lamp as well as the G. E. No. 5 and Wabash Press 25 lamps.

The Compak has caused the return to active duty of



THE G-E No. 20 photoflash lamp (above left) ushered in flash photography in 1931. The SM (right) starts flash photography's second decade.



BOTH PICTURES above are open-flash exposures. "A" was made with a regular flash bulb. Blur in arm and face is result of long duration of lamp's flash. "B" was made with the SM. Its 1/100-second flash stopped all movement in the moderately fast action of walking past the camera.

made from the same subjects at distances of 20 feet or more. The lamp is also good for taking extreme close-ups.

many old Kodaks of the 1920 to 1925 vintage. The Passive Synchronizer is ideal for ball-bearing and other types of automatic shutters on the market 15 to 20 years ago.

Further information from local dealer or Kalart Co., 915 Broadway, New York, N. Y.

DynaFlash Synchronizer

The Ansley DynaFlash Synchronizer (\$7.50, including batteries and cable release to fit customer's camera) synchronizes G. E. No. 5 and Wabash Press 25 flash bulbs with almost all shutters having a cable release.

The DynaFlash is furnished in a stainless steel case (shown in lower left-hand corner of illustration) only slightly larger than a package of cigarettes. Polished reflector is on inside of case lid and batteries and lamp socket are also mounted in the case. In use, the case is attached to tripod socket of the camera (see illustration).

Synchronization is accomplished by adjustment of cable release plunger to provide flash contact at correct interval before the shutter is released.

More information from: Ansley Radio Corp., 4377 Bronx Blvd., New York, N. Y.



Tester for Synchronizers

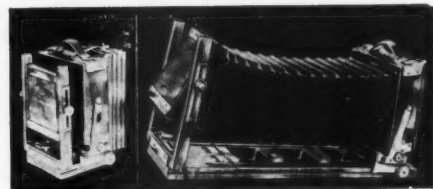
The B. B. S. TESTER

(\$1.75) tests bulbs, batteries, and synchronization in one unit. This eliminates chance of missing a picture because the bulb would not flash, the battery in the synchronizer was weak, or the synchronizer was off on its timing.

Further information from: The Weinert Company, 112 W. 44th St., New York, N. Y.



R. H. S. 4x5" View Camera



The R. H. S. 4x5" View Camera (\$32.50) is of kiln-dried hardwood construction with dovetailed joints and a hard lacquer finish. Focusing track is of cut brass, mounted the full length of the camera bed.

Bellows extension of the R. H. S. View Camera is 20". Lens board has rising, falling and tilting movements. Back has forward and backward tilt for distortion correction.

Interchangeable reducing backs (\$4.50 each) adapt camera for 2 1/4x3 1/4" and 3 1/4x4 1/4" film sizes.

Further information from local dealer or (in East) from Raygram Corp., 425 Fourth Ave., New York, N. Y.; (in Mid-west) from Hornstein Photo Sales, 320 W. Ohio St., Chicago, Ill.

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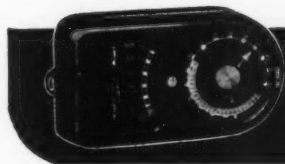
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moisture is *kept out*. Thus your exposure readings . . . *your picture results* . . . are more certain with the MASTER.

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New

PRODUCTS

Cinemaster Dual-8mm. Movie Cameras

The Cinemaster Dual-8mm. (Model E-8, \$27.50 and up; Jewel Model F-8, \$32.50 and up) uses all standard double-8mm. film, either color or black and white, and also the Univex Straight-Eight film at 69c a roll.

Features (see illustrations) are: (1) Combined exposure meter and optical view finder with etched masks showing exact coverage of telephoto lenses. Finder image is large and brilliant. Built-in extinction-type exposure meter is operated by a dial on side of camera and a flick of the finger places the meter in position inside the viewfinder.

(2) Small distance between viewfinder and camera lens minimizes parallax. (3) Speeds of 16, 24, and 32 frames-per-second are provided. (4) Exposure calculator gives readings for various light conditions. (5) Starting button can be locked in taking position, enabling operator to film himself.

(6) Standard equipment is the Univar anastigmat, f3.5, f2.7, or f1.9 in micrometer focusing mount. Supplementary f3.5 telephoto lenses of 1" and 1½" focal lengths also made.

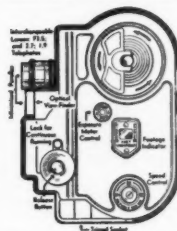
(7) Footage counter is calibrated for both single-8 and double-8 film rolls and is automatically reset for each new loading. (8) Hinged body opens into two unobstructed halves and film gate remains open during loading. (9) Take-up sprocket assures free film transport, steadiness and uniform speed.

(10) Governor and gears maintain high uniformity of speed during entire film run.

(11) Spring motor runs six feet of film (enough for three sequences) on a single winding.

(12) Focal plane shutter operates at 1/30 second exposure time at film speed of 16 frames-per-second. (13) Finish (see photograph) is antique bronze with chromium trim.

(14) Die-cast metal body with snap-closing, hinged cover is strong and light. Full information on prices of camera with various lenses, from local dealer or Universal Camera Corp., 28 W. 23rd St., New York, N. Y.

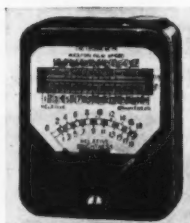


Weston, Jr., Cine Exposure Meter

The Weston, Junior, Cine Exposure Meter (\$15.00; sole leather case, \$1.00) provides correct exposure settings for any movie camera, using any film, either black and white or color. The dial reads directly in correct f-stops, making it easy for even the beginner quickly to understand its operation.

The meter is set for type of camera and film speed. A light reading of the subject is taken. The value obtained is then located on the relative brightness scale of the exposure guide. Above this figure on the f-stop scale is shown the correct stop at which to expose the film.

At camera dealers. Made by Weston Electrical Instrument Corp., Newark, N. J.



Cleaner for Kodachrome and Other Color Films

To remove dust or finger prints from either emulsion or base side of Kodachrome and other color films, the Merix Special Film Cleaner (45c for 4 oz., 85c for 8 oz., and \$1.50 for 16 oz.) can be applied without danger of changing the color or damaging the film.

The Merix cleaner is applied by wiping the film gently with a piece of cotton, flannel, or silk plush.

Further information from local dealer or Merix Photo Co., Tribune Tower, Chicago, Ill.

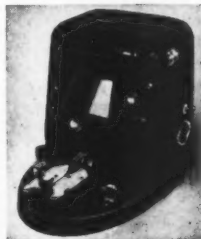
B & H "Filmotion" Viewer

The Bell & Howell "Filmotion" Viewer shows actual movies, size 2 1/4 x 3" in 16mm. model; 1 3/4 x 2 1/4" in 8mm. model, when film is run through for examination or editing.

Special anastigmat lens and front-surfaced, aluminized reflecting mirror are said to give sharp, "ghost-free" images on the viewer's groundglass screen.

Recessed channel and rollers keep picture surface free from any damaging contact with viewer mechanism.

Further information from Bell & Howell Co., 1801 Larchmont Ave., Chicago, Ill.



VapOrate Treatment Termed Standard

Specification No. 41 on films for Visual Education in National Defense Training for the Office of Education of the Federal Security Agency and all other government offices desiring prints, reads:

"Unless otherwise specified by the ordering office, each print shall be subjected to a permanent conditioning and protective treatment, equal to the 'VapOrate' process, reacting directly on the emulsion itself, the effectiveness and permanence of which are evidenced by a substantial raising of the melting point of the emulsion in water without loss of pliability reserve."

The phrase "reacting directly on the emulsion itself" apparently excludes surface applications such as, lacquers, waxes, oil, etc.

Besbee Closeup Kit

The Besbee Closeup Kit (\$3.75) works with any 8 mm. or 16 mm. movie camera, making sharp closeups of flowers, small birds, insects, etc. Kit consists of a tripod table, camera handle, adjustable lens holder, and two closeup auxiliary lenses, working at ten and thirty inches. An assortment of six closeup lenses (\$4.00) for distances of 7", 12", 15", 18", 24", and 27" is an accessory.

Further details from Besbee Products Corp., Trenton, New Jersey.



Wide Angle Lens for 8mm. Cameras

The Cine-Extensar wide angle lens (\$25.00, with adapter) doubles the angle of view from a given camera position. In filming a horse race, for example, the Cine-Extensar will include all the horses running, as compared with just the leaders that can be photographed with a lens of normal angle of view. The Cine-Extensar is screwed onto regular camera lens for wide-angle shots.

Further information from: Camera Specialty Co., 46 West 29th St., New York, N. Y.

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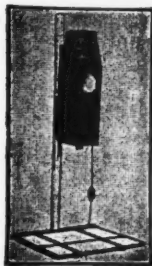


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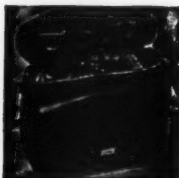
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4302 Sunset Blvd., Hollywood, Cal.

Carryall Cowhide Bag

The Lafayette Cordovan brown Cowhide Carryall Bag (\$3.49) measures 10 x 8 x 3" and has pockets to take the following: (1) a camera as large as the standard 3x12-cm. models, (2) exposure meter, and (3) flash unit. A long snap-fastened pocket holds the filters.

A brass-finished zipper closes the bag's top, and an extension tongue on this zipper permits folding the top back to make interior easily accessible. Hardware is also brass finished.

Sold by Lafayette Camera, with General Offices at 100 Sixth Ave., New York, N. Y., and branches throughout the country.



Photographs by Alexander Alland

The Spring Number, 1941, of the quarterly magazine, *Common Ground* contains eight photographs by Alexander Alland of new Americans (recently naturalized American citizens).

Alland's photographs have recently appeared in the New York picture newspaper, *PM*, and elsewhere. His future exhibitions will be sponsored by *Common Ground*, and inquiries about open dates for any exhibits may be addressed to him in care of *Common Ground*, 222 Fourth Ave., New York, N. Y.

This magazine plans to publish pictures showing the diversity of types that make up the American population in each of its future issues. Both amateur and professional photographers are invited to send in glossy prints showing old as well as recent immigrant types, characteristic houses, churches, neighborhoods, and settlements in the U. S., etc.

Payment up to \$5.00 per print will be made for each photograph published.

Easel for Clamp-on Lights

The Cambridge Clamp Lamp Easel (35c each) is a small stand to which the regular clamp-on flood reflector can be fastened in place of using a chair back, door, or similar makeshift.



It easily substitutes for a light stand in many cases. It can be placed on tables, desks, or other surfaces that might otherwise be scratched or marred by the lamp.

Distributed in the East by Raygram Corp., 425 Fourth Ave., New York, N. Y.

Made by United Photo Products Co., Inc., 63 Franklin St., Boston, Mass.

NOTES FOR MOVIE MAKERS

Wesco Home-Movie Scenarios (\$1.00 to \$5.00) provide the amateur with "shooting scripts," novel props and effect accessories, as well as filmed main titles, title cards, and directions for producing trick effects. List of Scenarios from: Western Movie Supply Co., 254 Sutter St., San Francisco, Calif.

Craig Fotofade (\$1.00 a bottle) produces fades and wipes without special equipment. A complete Fotofade Kit contains special masking tape, and instructions as well as bottle of Fotofade. Made by Craig Movie Supply Co., 1053 S. Olive St., Los Angeles, California.

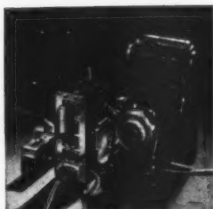
The Amateur Sound Equipment Department of Jack Schiff's store, 55 Vesey St., New York, N. Y., displays latest sound equipment for home use. Schiff has had ten years' experience in this field.

Leitz Cover Glass Plates with ground edges (box of 600, \$7.00) make the production of 2x2" slides from 1x1 1/2" transparencies quicker, neater, and with the individual slides more uniform. At Leitz dealers or from E. Leitz, Inc., 730 Fifth Ave., New York, N. Y.

Synchronizer for Flood Lamps

The Cameratrol Photoflood Synchronizer (\$9.95, complete with a remote control switch and 18-ft. cable, two 8-ft. lamp cords with male plugs, and sockets for flood lamps) permits focusing with floods burning at brightness of ordinary room lights and exposing the film with floods at full brilliance only for duration of the exposure.

The Cameratrol is attached to the camera as shown in the illustration, and the cable release fastened in position. The flood lamps are plugged into the black receptacles on the device. Remote control switch, at the end of an 18-ft. cable then operates both shutter and flood lamps.



A Hi-Lo switch burns the flood lamps at brightness of ordinary room lights until operator throws the remote control switch in his hand. This simultaneously burns the flood lamps at their peak brilliance and releases the camera shutter. Cameratrol does not harm shutter mechanism.

Life of the flood lamps is greatly increased, since they burn at peak brilliance for only short periods; current consumption is also reduced. For slow films, bulb exposures may be used with device. For fast films, high shutter speeds may be used.

The Cameratrol fits most cameras made today. A special Leica tip is supplied on order. Device is guaranteed for a full year after purchase against defects in materials or workmanship.

Further details from local dealer or American Bolex Co., Inc., 155 E. 44th St., New York, N. Y.

Table-Top Tripods

The Albert Table-Top Tripod (\$3.50) is a solidly constructed tripod, strong enough to hold the heaviest cameras. It has a long-handled, tilt-top that locks securely in desired position. Holds cameras at all levels from the table top itself to 13 inches above the table. (Illustration shows this tripod.)

The Royal Midget tripod (\$1.95) is similar in design but has a tilt top of simplified construction.

Made by Albert Specialty Co., 231 S. Green St., Chicago, Ill.



BOOKLETS AND CATALOGS

Nu-Art News (Free), issued monthly by Nu-Art Films, Inc., 145 W. 45th St., New York, N. Y., contains information on late 16mm. sound film releases, giving plots, running time, etc. In addition it publishes shop talk concerning 16mm. exhibitors. Copies from above address.

Mystery of Filters (16 pages, 2nd edition, revised, 25c) discusses in non-technical terms the theory and use of all types of filters. Includes charts and diagrams showing uses of various colors of filters and their effect on values in final print. Copy from local dealer or direct from Harrison & Harrison, 8353 Santa Monica Blvd., Hollywood, Calif.

George Murphy, Inc., Catalog No. 400 (272 pages, 25c) lists latest photographic specialties used by the beginner, advanced amateur, and professional. Price of catalog refunded on first purchase of \$1.00 or more. Copies from: George Murphy, Inc., 57 East 9th St., New York, N. Y.

Mogull's 1941 News (20 pages, Free) is a photographic catalog in tabloid-size newspaper form. It contains both articles on photography and a listing of 2500 items of still and movie equipment and all types of accessories. Copies from: Mogull's, Inc., 68 West 48th St., New York, N. Y.

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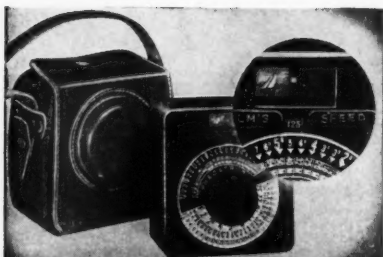
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Versatile Picture Frame for Home or Office

Six Braquette picture frames (\$1.00 each) as shown on the wall in this illustration, provide an attractive modern way to hang an easily-changed exhibit of photographs in the office, sales room, studio reception room, or a den or living room in the home.

Advantages of this type of frame are: (1) Its size is easily altered to fit mounts up to 36" long. (2) Pic-



tures are easily removed and replaced, providing variety without the necessity of removing tacks and replacing backing as in ordinary wall frames. (3) Only a small portion of the frame is visible from the front, making for simplicity of wall decoration. (4) The simple design of this visible framing element is suited to all types of subject matter.

Further information at local dealer or from: Braquette, Inc., 225 Fifth Ave., New York, N. Y.

Amfile All-Purpose Binder

This Amfile Binder, size 9 3/4 x 11 1/4", holds photographs or printed sheets, etc., in envelopes of heavy transparent acetate, that fasten into the binder in loose-leaf form. Material may be mounted on both sides of the white cards, and transparent envelope protects both sides. Binder leaves lie flat when open.

Binder costs \$1.00, 12 white mounts and 12 acetate mount coverings cost \$3.25 extra.

Circular from: Amberg File and Index Company, Kankakee, Illinois.



Pocket Photo Albums

This Pocket Photo Album (10c) holds the prints from a full roll of pictures. No paste, water, or corners needed to fasten the pictures in place. Instead, Miracle-strips, with a pressure-sealing adhesive, similar to a first-aid bandage strip, hold the pictures in place.



Peel the protective covering from one of the strips, which are bound together with a transparent plastic cover, and finger-smooth the print onto the strip.

The clear plastic front makes the first picture the album's front cover. Unbreakable plastic tube-binders hold the album leaves together.

Available at dealers. Made by Edwin M. Phillips & Co., 420 Lexington Ave., New York, N. Y.

Panatech, Sr., Wood Tripod

The Panatech, Sr. Tripod (\$5.50) is constructed of hardwood and measures 60" high when extended. It closes to 34" and weighs 4 lbs. 6 oz. Rubber pads on the single-extension legs prevent slipping on smooth surfaces.

Further information from local dealer or Panatech Corp., 485 Fifth Ave., New York, N. Y.

Miles 35mm. Negative File

The Miles 35mm. Negative File (\$1.95) holds eighteen 36-exposure rolls in strips, each strip in a dustproof envelope, a total of 648 negatives. The size of a book with cover dimensions of 7 1/4 x 10 1/4", the file also has a simple, yet complete index system.

Any negative, with its record, can be easily located. The record of each roll can be entered in the separate pocket-size photo record book furnished with the file. An index of titles, permanently attached, serves as a cross-index making it easy to locate a desired negative.

Supplied in black, red or blue.

Made by E. E. Miles Co., South Lancaster, Mass.



NOTES FOR CAMERA OWNERS

Herman Lutz, former newsreel cameraman, is now in charge of Film Center Reloading Service, P. O. Box 272, Station G, New York, N. Y. His specialties are 35mm. Eastman bulk film and reloaded cartridges.

Production of Gaevent papers, films, and plates, has started in the completely modern plant at Williamstown, Mass. Stocks of Gaevent materials were formerly imported from Belgium. Further information from: Gaevent Co., of America, 423 W. 55th St., New York, N. Y.

The Camera Repair Department of Aladdin Camera Exchange, 4 East 32nd St., New York, N. Y., is in charge of Robert Einenger, formerly with Carl Zeiss, Inc. This department is set up to handle many different types of repair work on cameras and accessories.

Old cameras and accessories, of interest to amateurs looking for replacements or additional equipment to use with some outfit they own are among the stock of the New York Camera Exchange, 116 Fulton St., New York, N. Y. This store inaugurated the camera exchange idea fifty years ago.

Amateurs who are confused and uncertain as to which type of equipment would best suit their needs can consult William Lotochi, "Photographic Specialist" at the Lotock Camera Exchange, Chrysler Bldg., New York, N. Y.

The Alan Rapid Exposure Calculator covers 23 different film types in 40 possible outdoor light and subject combinations. Six filter factor compensations are also on the dial. Camera settings for artificial lighting are on reverse side of this celluloid dial. Flood, flash, and regular Mazda lighting conditions are covered. From Pacific Photo Distributors, 1012 S. Olive St., Los Angeles, Calif.

Trade-in Allowances are being offered on used cameras traded in on the Giro-Flex all-metal twin lens reflex camera (\$42.50) at Willoughby's, 32nd St., near 6th Ave., New York, N. Y. Cameras are appraised without obligation, if a full description of the camera with statement of its condition is sent to above address.

NEW PRICES

The Lutrix Exposure Meter at \$11.95 still includes interchangeable still and cine dials and a cowhide everready case. Distributed by Intercontinental Marketing Corp., 95 Madison Ave., New York, N. Y.

The Goodspeed Special Bayonet Base Bulb Reflector Unit, now \$4.95, takes G. E. No. 5 and Speed Midget and Nabash Press 25 flash lamps. Complete price list on Goodspeed Flash Synchronizers from: Goodspeed Sales Corp., 34 W. 27th St., New York, N. Y.

New MAKE-UP that gives you HOLLYWOOD results

Why do so many of your friends say, "I take a terrible picture?" Why are results frequently unsatisfactory, in spite of good cameras? The trouble lies with the *subjects themselves*. For every face shows camera faults and imperfections that special lighting and ordinary street make-up cannot hide.

Now, for the first time, you can get makeup especially developed for *all* black-and-white photography. With the new Hampden's Photographic Make-up, regardless of the size, make or price of your camera, you can subdue bad features, highlight good points, bring out the whites of the eyes and give them sparkle, achieve beautiful, flattering, movie-quality results in your pictures.

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Easy to remove

Enables you to conceal defects and give the skin a beautiful smooth, satiny finish.

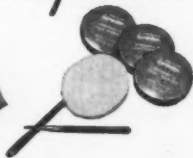
Complete instructions are contained in every kit, including 24 drawings with specific directions showing you how to overcome many common imperfections quickly and easily.

One trial will show you that Hampden's Photographic Make-up will save you time, trouble and wasted film and give you beautiful, natural-looking pictures, better than you ever dreamed possible. Get your kit today at any photographic store. Or order direct: Hampden Sales, 251 Fifth Avenue, New York.

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Sheet aluminum, coated with an emulsion similar to the silver halide gelatin layer of ordinary photographic sensitized materials is out of the laboratory stage.

The sensitized aluminum may be exposed by either contact printing or in an enlarger having an intense light source. It is developed and fixed as any regular printing paper. Its slow speed, however, eliminates need for a special darkroom.

A faster enlarging emulsion has also been developed, and when this is in production, the amateur photographer will have a new surface for printing greeting cards, personal cards, photographic plaques, and subjects such as snow scenes suitable to a silver background.

Sheets are supplied in thicknesses of .006, .008, and .010, in the following sizes: 5 x 7" (\$1.25 for 6, \$2.00 a dozen), 8 1/2 x 11 1/2", 11 1/2 x 17", and 17 x 23". Sheets as large as 5 x 10 feet can also be coated by this process.

Sold direct by the manufacturer: Republic Engineering Products, Inc., 480 Lexington Ave., New York, N. Y.

Chemical Retouching

When a long-scale negative image is printed on photographic paper, there is a definite loss of delicate gradations. An obvious example is the necessary sacrifice of halftone values when contrast with rich blacks and sparkling highlights are desired.

A balanced chemical control technique of retouching directly on the finished print, brings detail into black areas, puts snap into the highlights, removes backgrounds, and increases the scale of the photographic paper.

The Carl Dial Chemical Retouching Set (\$2.75, complete) contains all chemicals needed for gradual reduction of photographic prints.

Retouching the negative has long been considered difficult for the amateur because the results cannot be judged directly. Retouching miniature negatives is next to impossible because of the tiny image size. The chemical retouching of prints, however, may be judged directly and thus need for extensive hand work on negatives is largely eliminated.

Cutfit includes reducer solution and chemicals to apply to the print to stop the reducing action.

Further information from George Murphy, Inc., 57 East 9th St., New York, N. Y.

Defender Texture Screens

Defender Texture Screens, designed by Jack Powell, Pasadena, Calif., are made in 8x10" and 11x14" sizes in six patterns: Type A, Dry Point Etching; Type B, Steeline; Type C, Tapestry; Type D, Renaissance; Type E, Bromoil; and Type F, Paper Negative.

Each screen has a black border for easy handling and to avoid finger prints on the screen. The border can be trimmed to fit the paper guide on the enlarger easel.

Screens are suitable for both projection and contact printing. Exposure time is increased from 1 1/2 to 2 times normal, when the screen is used.

Tapestry and Steeline patterns give effective results when used on Chromatone natural color prints. These two patterns do not have to be registered.

Made by Defender Photo Supply Co., Inc., Rochester, New York.

NOTES FOR DARKROOM WORKERS

The G-E 50-100-150-watt "A 21" white Mazda photo enlarger lamp can be used in the latest model Solar Enlargers. The special socket, with the three-position switch necessary to operate this lamp, is now standard equipment on Solars, made by Burke & James, Inc., 223 W. Madison St., Chicago, Ill.

Demonstrations of 'Tabloid' Toners and 'Soloid' Stains are made at the New York Laboratories of Burroughs Wellcome & Co. (U. S. A.), Inc., 9 East 41st St., New York, N. Y. Readers of MINICAM are invited to attend these demonstrations.

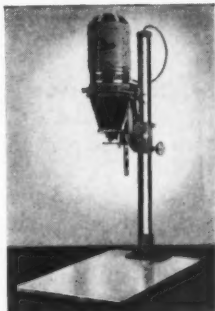
DeJur "Versatile, II" Enlarger

The DeJur "Versatile II" Enlarger, (\$55.00, without lens) takes up to $3\frac{1}{4} \times 3\frac{1}{4}$ " areas from negatives as large as $3\frac{1}{4} \times 4\frac{1}{4}$ ", and is similar in design and construction to the "Versatile I" Enlarger, with exception of the negative and distortion control feature not included in the "Versatile II."

The Versatile II has two 5" condensers. Dual controls permit the adjustments to be made from either the right-hand or left-hand side of the instrument. "Aero-Tech" ventilation and a heat-absorbing filter ensure cool operation.

Except for the die-cast lamphouse, metal parts are made of steel. Other features: Plastic control knobs, large laminated wood baseboard, ball-bearing cap that permits counter-balance tape to turn when enlarger head is swung on upright, and rigid supports. Glassless negative carriers are supplied in various sizes. Enlarger comes with one dustless negative carrier and center-drilled interchangeable lens-board.

Further information from local dealer or DeJur-Amco Corp., Shelton, Connecticut.



Imperial Electric Agitator

The Imperial Electric Agitator (Model for 110-volt, 60-cycle, AC current, \$16.50) has a $\frac{6}{16}$ " chromium-plated agitator pan that oscillates 60 times per minute. Tank or container is placed in this pan, which has a pouring lip for disposing of any overflow of surplus solution from the tank.

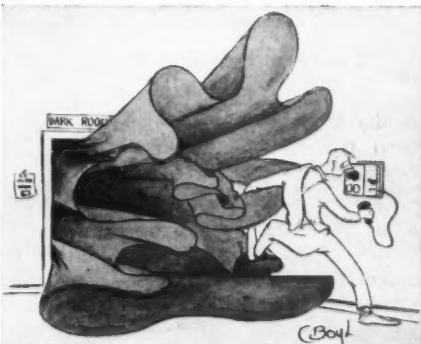
Agitation also produces a clockwise motion in a free wheel immersed in solution, thus assuring a continuous flow of fluid over the film. Agitator is made in models for any type of electric current, either AC or DC, in a variety of voltages.

Information from local dealer or Chess-United Co., Inc., Emmet Bldg., New York, N. Y.

NEW ADDRESSES

Intercontinental Marketing Corp., distributors of "Tested Photo Products" and Photrix products, are now located at 95 Madison Ave., New York, N. Y.
Photochrom Laboratory, Chicago, makers of Chromura color prints, have combined with Color Process Laboratory, West Coast makers of color prints. The concern, now known as Photochrom Imbibition Print Laboratories, is located at 837 Fairfax, Hollywood, Calif.

Filmack Trailer Co., producers of announcements of coming attractions for motion picture exhibitors has moved to 1327 S. Wabash Ave., Chicago, Ill.



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Leica Model F, case, F3.5 Elmar. F.P.	79.50
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Kodak Retina I, F3.5 Ektar, Compur Rapid.	42.50
Kodak No. 35, case, F3.5 K.A. Kodamatic.	27.50
Kodak Bantam, F4.5 K.A. Kodamatic.	15.00
Contax II, case, F2. Summar. F.P.	144.50
Contax III, case, F2. Summar. F.P.	159.50
Wirlin F3.5, Compur.	19.50
Argus C2, F3.5 Argus.	17.50
Argus A, F4.5 Argus.	5.50

1/2 V.P. CAMERAS

Detroit Model G, F4.5.	\$ 5.25
Foth Derby F2.5 Foth, F.P.	17.50
Zeiss Ikon I F4.5 Novar, Thelma.	11.50
Ihagee Parvula A, F3.5 Tessar, Compur Rapid.	29.50
Foth F3.5 Tessar, Compur.	22.50
Piccehite F2.9 Xenar, Compur.	15.00

1/2-120 and 2 1/4x2 1/4 CAMERAS

1/2-120 Ikamat A, F4.5 Novar, Thelma.	\$ 16.50
1/2-120 Super Sport Dolly F2.8 Tessar, Compur.	34.50
2 1/4x2 1/4 Agfa Speedox F4.5 Anast., Speedex.	17.50
2 1/4x2 1/4 Super Sport Dolly F2.9 Trioplan, Comp.	24.50
2 1/4x2 1/4 Super Ikenta B, F2.8 Tessar, Comp. R.	110.00
2 1/4x2 1/4 Ikenta B, F3.5 Tessar, Compur Rapid.	47.50

ROLL FILM CAMERAS

V.P. Zeiss Icarlette F4.5 Tessar, Compur.	\$ 17.50
V.P. Erasmann Special, F2.7 Ernatar, F.P.	35.00
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2 1/4x3 1/4 Goerz with Acc. F4.5 Dogmar, Compur.	24.50
2 1/4x3 1/4 Zeiss Cosmarette F4.5 Tessar, Compur.	22.50
2 1/4x3 1/4 Ikenta C Sp., case F3.5 Tessar, C.R.	79.50
2 1/4x3 1/4 Voigtlander Bessa F4.5 Skopar, Compur.	19.50
2 1/4x3 1/4 Kodak Sr. F4.5 K.A., Compur Rapid.	22.50
2 1/4x3 1/4 2C Kodak Ser. III F6.3 K.A. Diomat	12.50
3 1/4x5 1/4 Erasmann Bob D.E. F6.8 Ernatar, Chronos	10.00

REFLEX and REFLECTING TYPE CAMERAS

1/2-120 Pilot No. 6 F0.3 F.P.	\$ 12.50
2 1/4x2 1/4 Korella I F3.5 Victor, F.P.	54.50
2 1/4x2 1/4 Flexette F4.5 Trioplan, Prontor II.	34.50
2 1/4x2 1/4 Nat'l Graflex Ser. II F3.5 B.&L. Tess., F.P.	49.50
1 1/2x2 1/4 Exakta B F3.5 Exaktar, F.P.	59.50
2 1/4x3 1/4 R.B. Graflex Ser. B. F4.5 K.A., F.P.	47.50
3 1/4x4 1/4 R.B. Graflex Ser. D. F4.5 K.A., F.P.	87.50

FILM PACK and PLATE CAMERAS

2 1/4x3 1/4 Kwoee D.E. F4.5 Radionar, Compur.	\$ 27.50
2 1/4x3 1/4 Certo D.E. F3.5 Xenar, Compur.	37.50
2 1/4x3 1/4 Voigtlander Avus D.E. F4.5 Skopar, Compur	37.50
9x12cm Zeiss Ideal F4.5 Tessar, Compur.	57.50
9x12cm Voigtlander Borgehl, Kaiart R.F. F4.5 Hellar, Compur	69.50
5x7 Kwoee View, no lens.	24.50

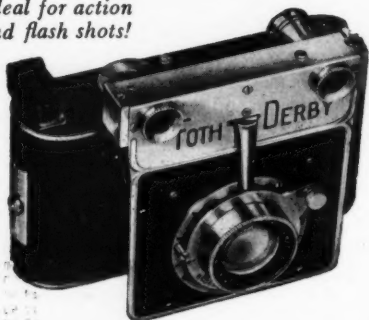
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AUGUSTA, GA.

A Picture Story of Your Day

(Continued from page 48)

the lettering is good. It's far better to use typewritten captions, or photostats thereof, than to rely on shaky, unsure, amateurish lettering. Give your reader all the breaks by making your series easy and pleasant to look at and to read. He'll return the compliment, with interest.

About captions. If you can get along without them, fine. If not, be very careful, for there's as much art in a good caption as in a good photograph.

With all this talk of care in the preparation and completion of a series, I hope you don't get the notion that there's anything necessarily finicky or old-maidish about photo-sequences. Far from it. They can be as strong and biting as any other form of art (if you've never seen sarcasm embodied in pictures, look up that famous sequence by Will Connell called "In Pictures"). But remember that any art pays much attention to finish, to the self-respecting presentation thereof.

And that mention of art brings us around to the final point. The photo-sequence is a distinctive art form in which, to date, there are very few experts. The field is wide open for cultivation and development. To some photographer equipped with imagination, understanding, and a degree of technical skill it may easily mean a niche in the hall of fame. To the rest of us, it can mean a lot of fun and an infinite amount of purely personal satisfaction.

Camera on the Desert

(Continued from page 57)

usually is mid-morning or mid-afternoon, when the light plays evenly and fully over all or most of the picture areas.

Shooting early in the morning results in an unnatural redness over the entire picture. This is due, not so much to underexposure, as is sometimes thought, but to the fact that the light in the early morning contains a predominance of red. This applies to the late afternoon sun as well. So, unless it is desired to picture sunrise or the rich colors of a sunset, color

shooting should take place around the middle of the morning and the early hours of the afternoon.

Haze can lend depth and atmosphere. If the haze is too heavy, a Pola screen may be used over the camera lens. The Pola screen in connection with Kodachrome renders colors in surprisingly natural brilliance. No filters, other than the ultra violet or Pola screen are used. A yellow filter, for example, would result in the picture reproducing a yellowish cast.

Color film has a slower emulsion rating than black and white film and it is advisable to use a tripod, for stills and movies. An exposure meter is especially valuable in color shooting since incorrect exposures mean off-color films.

● **REGARDING THE CARE** of the camera, avoid, above all things, the sand. This is no easy matter, especially where there is any kind of a wind, for the sand has a way of sifting through and penetrating into a camera that is deadly to shutters and other delicate mechanisms. I use a leather kit, containing filters, sunshade, exposure meter, and other equipment separately wrapped in oiled silk containers. The camera is kept in its own everyready case and put up immediately after taking each picture. A thorough going over is given every piece of equipment later. A soft, camel's hair brush is used, after this a rubber blower of the ear-syringe type to blow dust out of any little crevice inaccessible to the brush. Lens tissue should be used with extreme care, as there is the possibility of unknowingly grinding tiny particles of sand into the lens.

Having been born in a desert of the old world may partly account for my deep feeling for it. The results of my own experiences on the desert have convinced me that it offers a great deal to the photographer. Ever-changing, always fascinating, this same subject may be depicted in a thousand different variations. As such it may be a source of enthusiastic interest.

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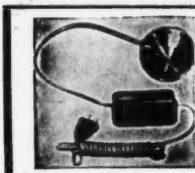
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Filters for Effect and Color

(Continued from page 53)

large lens aperture. In this way, the center of the picture is slightly diffused, while the definition gets softer and the picture darker as we approach the corners. This effect is shown in Fig. 14.

One caution in using diffusion. If a scene is perfectly sharp, followed by a diffused one, the audience will complain that the scene is fuzzy. However, if the scene is graded from a sharp long shot, slightly diffused medium shot, more diffusion on medium close-up, to a fully diffused close-up, the transition will be smoother and pleasanter. In professional parlance, you must watch your "diffusion continuity." Watch for it in the next movie you see.

Another important point. A correctly diffused image consists of a sharp image surrounded by a soft one. It is NOT the same thing as throwing the lens out of focus, which makes only a soft image, without the sharp lines that are necessary to give it drawing.

● WITH THE coming of today's extremely fast films, a new type filter has become necessary—the neutral. A neutral filter is gray and has no effect on the color rendition or sharpness of the scene. It is used outdoors when the light is so bright that even the smallest stop on the lens will cause overexposure. It is made in strengths of 2x, 4x, and 8x, and gives the effect of exposing 1, 2 and 3 stops smaller than the actual diaphragm setting.

It is also supplied combined with a yellow filter in two strengths. The Wratten 3N5 consists of an Aero-1 combined with a .50 neutral and has a factor of 4x (2 stops). The 5N5 is an Aero-2 combined with a .50 neutral and has a factor of 5x (about 2 1/2 stops). The effect on the screen is the same as with the Aero-2 or Aero-1 used alone.

The neutral filter also is used to decrease depth of field. Due to the great depth of focus of cine lenses, we frequently find that the background is excessively sharp. However, if we open the lens wide

to decrease the depth of focus, we over-expose. A neutral filter solves this problem by cutting down the light without affecting the color rendition of the scene.

Fig. 10 was taken at $f/8$ without a filter. See the sharpness of the background. Fig. 11 was taken in the same light at $f/2.8$, using an 8x neutral filter. The background is thoroughly diffused, and the subject stands out clearly.

One type of filter which does not fall in any of the other classes is the Pola Screen. This attachment will give dark skies without affecting the color rendition of the foreground. Its main use, however, is in suppressing unwanted reflections from polished wood, glass and water, though it will not affect reflections in polished metal nor in mirrors.

● IN USING filters the following points should be watched.

1. Color filters must be *clean*. A gelatine filter cannot be cleaned if it gets finger marked—it must be replaced. Cemented filters must be cleaned merely by breathing on them and wiping with lens tissue. Water or alcohol will damage the cement. Solid glass filters may be cleaned in the same way as a lens.
2. Always use a sunshade with a filter.
3. Figure exposure carefully, making the correct allowance for filter factor. Over-exposure tends to destroy the effect of filtering, underexposure to exaggerate it.

And finally, use no filter unless you need it. Modern panchromatic films give a remarkably accurate color rendition even without filters. But where a filter will improve it, or make your shot more dramatic—then a filter is definitely called for.

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Being Critical

(Continued from page 63)

finder, and yet is pretty disappointing when the prints come back from the photofinishers.

Underexposure of the foreground is a bugbear for many photographers who find a compromise between the long exposures necessary for the closeup and the short exposure required by the distant landscape difficult. "Expose for the center of interest and let the rest come as it will" is a good rule to follow unless you are making a silhouette.

If the photographer planned this as a silhouette he should have given less exposure in order to silhouette the figure completely. To be effective a silhouette must be so outlined that its form is obvious. The girl in the picture is well posed for an ordinary shot but for a silhouette her figure is lost because of the trees and rock walls in the background.

Painting With Light

(Continued from page 37)

ture that still gives sufficient depth of field.

Precautions to observe: *always* direct the light away from the lens and remain in the shadow when moving about before the lens while painting a scene. As long as the photographer is in the area between the lens and the reflector, which is too dimly lighted to record on the film, he will not show in the finished picture. Never direct the rays of the light toward the lens. Don't stand for very long in a direct line between the lens and the area being "painted." Move about constantly while "painting" before the camera to avoid recording your silhouette in the picture. Have plenty of extension cord on the reflector so it may be easily moved about while "painting." A black cord is best. Be certain to move the cord during the exposure to avoid a black streak in one part of the picture.

For commercial photography, parts of a large machine or other subjects may be "painted" with light for emphasis. This is

especially handy for catalog work, eliminating need for retouching the negative in many cases.

Trick photography also can be done with this method. One person's head can be photographed on another person's body or objects can be suspended in space without apparent support. The possibilities are unlimited.

For more on the use of flash lamps, see "How to Take Walkaround Flash Pictures" in MINICAM, March, page 24.

Before War Broke in the Balkans

(Continued from page 29)

Long before the war started, there were minor annoyances that caused headaches, bad prints and ruined negatives. These annoyances can be traced to the fact that there is no international system of speed rating for films or of voltage for electrical equipment such as enlargers, and slide projectors.

Some countries have a voltage of 220, which is the average, but in some places it may go as high as 240. Once I was all set to project some transparencies to a large gathering. They had assured me that the voltage was 110 volts and my transformer was arranged accordingly. I inserted the plug and bang blew out all the fuses.

All films in Europe are rated on the DIN or European Scheiner basis and it is very confusing to convert a German-made film to a Weston speed rating for the manufacturer provides only the European rating.

I used to order supplies in November to receive them next July—you can well imagine in what condition my flash bulbs, paper, films and developers arrived, after sitting for six months on a Genoa dock.

Despite all this, I look back with nostalgia on my improvised darkroom in Belgrade. There wasn't as much as running water, but I'm sure I got much fun and experience in working under those conditions.

All in all, however, it's great to be back home now and be able to take a picture

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(Continued from page 25)

of the bottle. Thus you cleverly reduce oxidation and deterioration.

19. Circus posters blossoming. Two thousand four hundred eighty-seven photogs plan to make a picture of some kids trying to peek under the canvas of the Big Top.

20. Spring term nears its end in most schools. And cameras should be busy snapping schoolmates and school scenes so that there'll be more than signatures in the back of the school "Annual."

21. Lindbergh landed at LeBourget, 1927.

22. Bright sun, today. Good for outdoor shots, but bad for those who insist on loading cameras in full sunlight. And there are more of these folks than you might think. It's because we tend to get more and more careless as our equipment gets better and better.

23. They hung Captain Kidd, this day, in London, 1701. And yet Kidd never, never was guilty of making a picture of a dog all dressed up, wearing specs, and with a pipe in his mouth.

24. Swell clouds today. Better make a few cloud pictures. Some of them may be stunning studies all by themselves. And you can often use good cloud stuff to pep up cloudless landscapes. You know the double-printing procedure. But, be sure that the direction of the light in both the cloud shot and the landscape is the same. Otherwise, your nature-faking will be obvious.

25. Sunday, and millions descend on Army camps to visit the boys. A busy day, filled with the constant clatter of clicking cameras.

26. Spring offensives on, 1915, 1916, 1917, 1918, 1940, 1941, etc., etc. It's a habit.

27. Lots of new homes getting under way. Movies of the construction process make swell memoirs. We've seen some fine home-building movies made, a few feet each day, from exactly the same point. The result is that the building appears to grow magically, from a hole in the ground to an occupied home.

28. Leopold surrenders, 1940.

29. Wedding season in full swing. Special albums of enlarged wedding scenes are becoming a real vogue. And there's no better wedding present than such an album—assuming, of course, that it's really a good job.

30. Memorial Day.

31. Joe Zilch remembers that, back on the 8th, he resolved to keep a good pictorial garden record.



*"Was I deceiv'd, or did a sable cloud
Turn forth her silver lining on the night?"—MILTON, Comus.*

DATA: Panatomic film, 1/100 sec. at f11, medium yellow filter. Print overexposed for low key effect. By B. H. Lipson.

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June 2	Fourth Annual Exhibit, Memphis Pictorial Club.	H. C. Wilson, Memphis Pictorial Club, 6 North Main St., Memphis, Tenn.	4	\$1.00
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May 19	Fourth May Salon of Photography of the Springfield Camera Club.	T. C. McMillan, 129 North Limestone St., Springfield, Ohio.	4	\$1.00
May 17	Eighth Annual Photographic Salon of Marshall Field & Company.	Marshall Field & Company, First Floor, Camera Section, 121 North State St., Chicago, Ill.	4	.50
May 15	Sioux Falls Second Annual Salon of Photography by The Pictorial Photographers of The North Central States.	A. S. Anderson, Y. M. C. A., Sioux Falls, S. D.	4	\$1.00
May 15	First National Salon of the Jersey City Y. M. C. A. Camera Club.	George E. Chittenden, Chairman, Jersey City, Y. M. C. A. Camera Club, 654 Bergen Ave., Jersey City, N. J.	4	\$1.00
May 12	Third Nature Salon, Hobbies Magazine.	Hobbies, Buffalo Museum of Science, Buffalo, New York.	4	\$1.00
May 12	Third Annual Northern New York Photographic Salon.	John A. Millard, Salon Chairman, 417 Franklin St., Watertown, New York.	4	\$1.00

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A Day at the Zoo

(Continued from page 17)

chromatic materials render most subjects accurately without the use of filters.

● **ALMOST AS IMPORTANT** as the equipment is animal psychology. Some animals, notably the monkeys and bears, are as much interested in the photographer as he is in them and there is little danger of their becoming frightened. Many monkeys and apes take a fiendish delight in throwing anything within reach at the unsuspecting lensman. This is a favorite trick of each of the big gorillas in the Philadelphia Zoo, one of which (the giant 450-pound "Bamboo") showered five newsphotographers at one time when he shattered half a watermelon against the bars.

The deer and the antelope, and in general, the birds, must be approached with caution and quiet. It is best to allow these animals to accustom themselves to your presence before making any pictures. Talking to them softly often helps, as does offering them food. Despite their gentle demeanor and soft eyes, both the deer and antelope are dangerous and untrustworthy. The only keeper ever killed in the Philadelphia Zoo was attacked by a deer.

Most dangerous to work with are the great cats and such animals as gorillas and chimpanzees. Fortunately, for safety's sake, the photographer is more likely to be frightened than the animals, or at least more wary and thus be more likely to keep out of reach. We remember one cameraman visiting the zoo with his club, who backed away from a tiger's cage so fast he knocked down a sign and didn't know he had hit anything at all.

Some animals are beguiling in their innocence until they get you within reach. This is particularly true of the llamas which can spit a good ten feet and don't hesitate to do so if they don't like your looks. Dumb animals are only dumb in that they cannot speak. When it comes to devilment they are exceedingly clever.

● **ANGLE SHOTS ARE** as valuable to pictorially expressing an animal as they are when photographing a building. Get down to the level of the smaller creatures and they will take on new and sometimes terrifying aspects. Even a house mouse with his long whiskers and beady eyes can look ferocious in 11 x 14 size! On table tops, either at home or in the zoo, fascinating pictures can be made of turtles, snakes, frogs, salamanders, lizards, small mammals and insects. A double extension bellows or a portrait attachment is necessary for this type of work. (See MINICAM, March, 1941, page 60.)

To photograph such a "table top zoo," set up a small stage containing a suggestion of the habitat of the animal. Focus carefully, then have an assistant place the the subject where you want it, perhaps restraining it a moment and then lifting his hand out of the way. Do not use too much background or the animal will become lost in a welter of unimportant detail. Frogs and salamanders must be kept wet, insects can be stupefied for a few moments by placing them in a jar with a piece of blotter which has been moistened with carbon tetrachloride. After removing them they can be posed as wanted.

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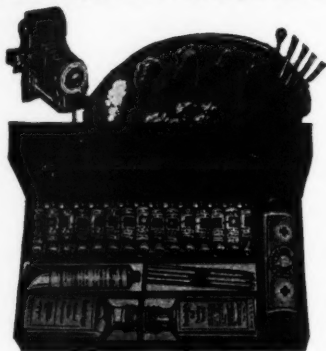
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perature of reptiles the more slowly they will move. A short siesta in the ice box (if the wife is out) will not harm them in the least and will make picture taking easier. Insects also can be treated in this way. Small mammals usually are very active and some means of preventing their escape should be provided. Often your small set can be built inside an aquarium and the pictures made through the glass.

• **BEFORE 1938, WHEN** the Philadelphia Zoo held its First Annual Photographic Contest for the best pictures made on the grounds, the use of cameras was not encouraged; now it is almost an unusual sight to see a visitor without one. So successful have the Philadelphia efforts proved that the Bronx Zoo in New York has followed suit. Your local Zoo doubtless will be glad to cooperate and a camera club trip "behind the scenes" is something to be remembered. Not only that but very likely the local zoo authorities would be glad to have pictures of their specimens.

The modern barless paddocks in some zoos, notably those of Cincinnati, Chicago, St. Louis, Detroit, Washington, San Francisco, San Diego, New York, Toledo, Buffalo, San Antonio and Philadelphia, make photographing the animals easy. At zoos that do not have the modern methods of display, if you enjoy solving tough photographic problems, you won't mind a bit.

The recording of the wildlife of today, in the field or in the Zoo is becoming increasingly important. War and man's constant encroachment on the natural habitat of animals will mean the end of many species. Some have already disappeared and others are on their way to oblivion. Photographers can leave a picture record but the time to start is *now*—before it is too late.

Man will always be interested in looking at animals or pictures of them, be he a salon judge or a youngster with his first kindergarten book. It is a heritage that has come to us from prehistoric time when the first men drew crude sketches of animals on the walls of their caves. Like

pictures of children, animal pictures hold a universal appeal.

Photographic expertness is not a prime requisite, for many times the experts do not do so well. Just plain "dumb luck" plays an important part—as does a good supply of patience. It's anyone's game. You'll enjoy it, for it combines all the thrills of a big game hunt with a good test of your ability to take pictures fast and accurately under stress.

Minicam's Calculator Dial

(Continued from page 68)

tographed with the $\frac{4}{8}$ -inch (10.5 cm.) lens $13\frac{3}{16}$ " from the object. What bellows extension (lens-to-film distance) is required?

Answer: On Scale "B" of the dial set the arrow opposite the lens-to-object distance, $13\frac{3}{16}$ ". On Scale "A," opposite the arrow, read 6 inches, the bellows extension necessary to focus the object sharply.

PROBLEM: What is the effective aperture of a $\frac{4}{8}$ -inch lens used at a bellows extension of 6 inches, when the diaphragm is set at f22 marked on the lens?

Answer: Keep the dial set for the first answer ($13\frac{3}{16}$ " on Scale "B" and 6 inches on Scale "A"). On Scale "C" the effective aperture is shown on the outer dial. Opposite f22 on the inner dial, for this bellows extension the effective aperture is f32. This applies to the amount of light actually acting on the film and not to the depth of field. At close distances the depth of field decreases greatly.

PROBLEM: An exposure meter reading on the same close-up subject calls for 10 seconds at f32. What diaphragm aperture marked on the lens is the equivalent of f32? If this marked aperture is used, a 10-second exposure is sufficient.

Answer: Keep the dial set as for the first two problems. On the outer scale of Scale "C" locate f32. Opposite this value on the inner scale read f22. This is the aperture at which the lens must be set to

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permit the indicated exposure of 10 seconds at f32.

For a more detailed description of the uses of this Calculator, see MINICAM PHOTOGRAPHY, March, 1941, pages 54 and 55.

Minicam Cut-Out Calculator Dials

The following cut-out calculator dials have appeared in previous issues of MINICAM:

	ISSUE	PAGE
Close-up and copying calculator for use with 2", 3", 4", 5" and 6" lenses. Gives lens-to-negative and lens-to-subject distances.....	May, 1940	45
Depth of Field; for 2", 4" and 6" lenses.....	June, 1940	55
Depth of Field; for 3" and 5" lenses.....	August, 1940	57
Depth of Field for close-ups; for 2", 3" and 6" lenses.....	October, 1940	60
Shutter speed and lens aperture dial. Speeds from 1/2000 second to 12 minutes and stops from f/1.4 to f/64.....	December, 1940	75
Proportion data. For enlarging or reducing (up to 36 times enlargement or reduction).....	January, 1941	73
Enlarger data. Effective apertures. Exposure factors. Lens-to-paper distances. Magnification sizes. All lenses.....	February, 1941	57
Close-up Calculator for 2" (50mm.) lenses. Gives lens-to-object distances from 2 3/4" to 6". Effective apertures from f/1.5 to f/64.....	March, 1941	55
Close-up Calculator for 3" (75mm.) lenses. Lens-to-object distances from 3 3/4" to 39". Effective apertures as above.....	April, 1941	72
Close-up Calculator for 4 1/4" (10.5cm.) lenses. Lens-to-object distances from 4 3/4" to 50". Effective apertures as above.....	May, 1941	68

Back issues of MINICAM are available for December, 1940, and subsequent numbers. To order, send 25c in coin or stamps per issue desired.

Dates in Birthday Pictures

In taking birthday pictures of children, particularly party pictures, get a large daily tear-off calendar or just a sheet from one containing the correct date. Place this somewhere in the scene, in a conspicuous place, making sure that it can be read in the finished print.



Another stunt is to cut out the large numeral from one of these calendars, to indicate the youngster's age. Have the child hold it up and point to it.

A series of birthday pictures over a number of years, using this idea, is very interesting.—
R. L. McColm, Interlaken, N. J.

Two-Tray Print Development

(Continued from page 31)

lead one to know how long a given print should be developed in the respective developers. A print can be put back and forth in the two developers at will until the desired result is obtained.

In using the developers independently it is possible on the one hand to slightly soften the normal contrast of a paper and on the other to slightly steepen the normal contrast. Advantage of this is taken when a negative is somewhat too soft or too brilliant to print on a given grade of paper, developed in more normally balanced developers. If the negative is slightly soft for the given grade of paper, the No. 130 (hard) developer is used; if slightly brilliant, the No. 120 (soft) developer is used. An example of one of these cases is shown in Figs. 1 and 2.

The amount of contrast control obtained by the two-tray procedure is not, of course, as great as a whole step in paper grade. One might think of the possible

variation as "half-grades". This control is quite useful in the production of prints of the very highest quality. Unquestionably, there are other ways to arrive at the same results as can be obtained through the use of the two-tray method, but the foregoing procedure has been thoroughly tested and proved to be capable of yielding unusually consistent quality in the hands of careful workers.



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CONTEST CALENDAR

Open to	Subjects	Prizes	For copy of rules, write to	Contest closes
Amateur photographers.	No restrictions.	\$100 first prize and twenty-nine other merchandise prizes.	Central Camera Co., 230 So. Wabash Ave., Chicago, Ill.	June 15.
Amateur photographers. Entries must be brought (not mailed), to 57 East 9th St., New York, N. Y.	No restrictions, but each contestant must submit print of not less than 7 inches in length and all prints must be mounted on exhibition board.	Merchandise prizes worth \$25, \$10, \$5.	George Murphy, Inc., 57 East 9th St., New York, N. Y.	June 15.
Anyone.	Photographs which illustrate the phrase "Sleeping Beauty".	\$50, \$25, \$15, and five prizes of \$5 each, and 10 gift packages of Pequot sheets.	"Sleeping Beauty" Contest Editor, 10th floor, 29 West 57th St., New York, N. Y.	May 15.
Readers of "The Lycoming Star".	Snapshots which convey the thought "Power by Lycoming".	Gold-plated Lycoming wing lapel emblem for every entrant. \$5 for winner of each month's competition, and \$25 for best photograph of the year.	Aviation Manufacturing Corp., Lycoming Div., Williamsport, Pa.	Monthly.
Amateur photographers.	Two Kodachrome transparencies of a girl between 16-26. One should be a closeup head shot, and the other should be a full figure, preferably in a bathing suit.	\$1,000 in prizes for the winning photographer's pictures of "Miss Photography, 1941."	Rabson's Magazine, 111 West 52nd St., New York, N. Y.	September 1.
Amateur photographers.	No limitation on subjects, but all prints must be made from single-frame 35 mm. negatives and enlarged to 8 x 10's.	\$300, \$200, \$50, twenty-five prizes of \$10 each, and forty prizes of \$5 each.	Universal Camera Corp., 28 West 23rd St., New York, N. Y.	July 31.
All photographers.	Pictures featuring coffee or tea, but both commodities may not appear in the same photo.	Two \$50 prizes, and eight prizes of \$25 each.	"The Spice Mill" Magazine, 106 Water St., New York, N. Y.	July 15.
Anyone.	Prints toned in color.	\$15, \$10, \$5, three \$2.50 prizes, also 6 Kolor-Chrome Kits. Prizes doubled for using Gem Kolor-Chrome.	Weimat Company, 112 W. 44th St., New York, N. Y.	June 30.
Anyone.	Domestic animals or birds.	\$25, \$15, \$5 and ten \$2 prizes. Ten subscriptions to "Our Dumb Animals".	Contest Editor, "Our Dumb Animals," 180 Longwood Ave., Boston, Mass.	June 30.
Amateur photographers.	No limitation on subjects, but pictures must be colored with Raygram Photo Colors.	46 photographic merchandise prizes.	Contest Editor, Raygram Corp., 425 Fourth Ave., New York, N. Y.	June 15.

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Book Reviews

RETOUCHING AND IMPROVING NEGATIVES AND PRINTS. 14th edition. By Johnson and Hammond. 158 pages, illustrated, 6 1/4 x 9 1/4", American Photographic Publishing Company, \$2.50.

This book was originally written for people engaged in straight portrait and commercial retouching. Many pictorialists are now discovering that they can retouch a negative, make a positive, retouch that, and make a copy negative to the correct size and make projected prints with ease and facility. The results of simple retouching are astounding.

This book is an authoritative and instructive

reference on retouching and is of definite practical value for every serious photographer.

Part I is devoted to work on negatives and part II to work on prints. Coloring with water and oils is covered in separate chapters.

I WITNESS. By Norman Alley. *Wilfred Funk*, publisher, \$2.75.

This is the breath-taking story of the daring exploits and racy personal experiences of a world's premier news reel cameraman. He has risked death a hundred times on a score of action fronts to get pictures of electrifying events just as they happened. Wherever there has been front page news around the world, Norman Alley was usually present.

He was aboard the U. S. gunboat Panay when it was attacked by a Japanese air squadron and photographed the wave after wave of red-nosed bombers that blasted the vessel to the bottom of the Yangtse River.

His pictures of this outrage were flown to the President and Navy officials to view as soon as possible. Alley tells the full uncensored story for the first time in his book recounting his experiences.

PHOTOGRAPHING CHILDREN. By W. Suschitzky. 80 pages, illustrated, 7 1/4 x 10". *The Studio Publishers*, London, \$3.50.

This is a book of unusual quality in that the publisher has not been satisfied with ordinary printed illustrations, but has included special reproductions pasted into the book.

The author, an outstanding British photographer, covers the subject of child photography thoroughly from the choice and use of equipment to the psychological aspects which distinguish the artist from the ordinary photographer.

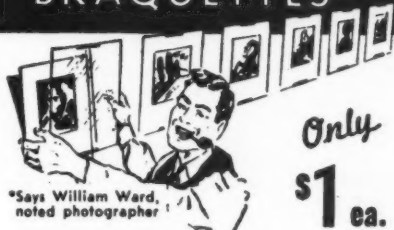
"It's not always the most beautiful child who makes the best pictures, but the liveliest, the one with the most personality," he says, and then proceeds to relate in detail how he handles tiny subjects of all ages and gets his excellent results.

CHEMISTRY FOR PHOTOGRAPHERS. By Allen R. Greenleaf. 177 pages, 6 x 8". *American Photographic Publishing Co.*, \$2.00

Those who buy their chemicals ready mixed will not be interested in this book. But those who are not content to blindly follow manufacturers' instructions will find that this book explains simply and clearly the why's and wherefore's behind chemical photographic processes.

Chapter I provides definitions of chemical terms, and the book goes on, from the point of view of the practical chemist, to take up, in separate chapters, emulsions, developers, devel-

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U. S. CAMERA ANNUAL. Two volumes. Price, \$4.85.

This issue of U. S. Camera is in two volumes size 9 x 12" and includes sixteen pages in full color.

Volume I is a "pictorialization of the American scene," including farm pictures, city pictures, color photographs of Montana lakes, rooms in the White House, Philippine landscapes, cattle ranches, Detroit docks, Indian schools, winter in North Dakota, the World's Fair. Also an article on Dorothea Lange and her Dust Bowl pictures, a group of war pictures, and photographs of American flags, guns, and airplanes.

This volume ("America") includes the farm photographs of J. W. McManigal, the frontier pictures of William Henry Jackson, and the documentary pictures of Dorothea Lange.

Flash For Color

(Continued from page 66)

A diffusing cloth to be used over the lighting unit right at the camera is useful in many instances . . . especially in closeup pictures of people . . . to cut down and soften the intensity of the light. The oiled silk dish covers with elastic edging which can be bought in the five and ten cent store make excellent diffusers for flash. They must be colorless . . . or but faintly amber, however, or they will destroy the color value of the light for anything but black and white photography. A flashing lamp will not scorch a diffuser slipped over the reflector because the heat from the lamp is of such short duration.

The best flash bulb to use depends on the camera and the way it is used. For "open-shut" flash, especially on 110-volt circuits, the high-peak, quick-flashing foil-filled lamps are recommended. For synchronized use a wire-filled lamp is better because its broader peak light allows more latitude for variations of performance with various equipment. With accurate synchronizers, such as those in press use, the foil-filled lamps may be successfully used for their extra punch of light. For

focal plane synchronization, the special wire-filled focal plane lamps, with their extra long flash duration, are best.

One of the *midget* flash bulbs is the ideal lamp for all-round use in the *proper reflector*. Accurate for synchronized use, small enough that several dozen can be stuffed in a man's coat pocket, swift enough for "open-shut" flash use, and low in cost, it makes flash photography easy and convenient. (A full description of various flash lamps appears in *MINICAM*, April, pages 54-57.)

The midget flash must be used in a reflector especially designed for it, if full advantage is to be taken of its light. A wide variety of these reflectors is now available. Particularly suited for color photography is the type featuring a diffusing ring nested in a concentrating reflector. With the ring in, the light is spread over a 50 degree zone. With the ring out, most of the light is packed into a 30 degree beam . . . which gives it extra carrying power and a spotlight effect. One of these reflectors used in a synchronizer right at the camera, with the diffusing ring in, for general illumination, and the other used on an extension cord around to one side of the subject, with the ring out will give depth and brilliance to the picture. If both reflectors are kept the same distance from the subject . . . the sidelight having the ring out . . . the difference in intensity of the light on the subject will work out ideally for the latitude of color film. The difference will be noticeable . . . but the brightness from the side light will not be too great.

● **MAKING PICTURES.** To get to the heart of the matter of solving the problems of good color pictures with photo-flash much can be learned in exposing one roll of color film, if each picture is made with a purpose. Take a 35 mm. camera, a synchronizer equipped with the dual purpose reflector for the midget photo-flash, a sidelight unit of the same type, an extension cord, a tape measure, a diffus-

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ing cloth, twenty-five midget flash bulbs and an eighteen exposure roll of Kodachrome Type "A" and go at it.

The equipment suggested is used because it makes possible the illustration of the greatest variety of uses for color flash. The procedure can be modified to suit other equipment. In such cases a few trial pictures on black and white film with the lamp and reflector combination to be used will give a starting point for getting the color exposures right. Use a relatively slow panchromatic film like Panatomic X or Finopan. Give the Kodachromes about twice that exposure which produces a good negative on these black and white films.

● **FLASH NUMBER** tables for use with Kodachrome appear on page 66. (Flash number tables for use with black-and-white film appeared in MINICAM, April, pages 52-53.)

Because cameras and reflectors vary greatly in relative efficiency, and because color film does not have the latitude of black-and-white, it is a good idea to make a test exposure of a roll of color film.

For exposures 1, 2 and 3, in your own home and with your own equipment, stand a person against a plain wall indoors and measure off exactly 10 feet in front of him to the camera position. Set the shutter for 1/100 of a second and the diaphragm for f5.6 or f6.3. Make the picture.

Close down the diaphragm one full stop and make picture No. 2. Close down another full stop and make picture No. 3. The middle shot (No. 2) at about f8, should be nearly right.

By studying these first three pictures when they are finished and referring to the exposure data (keep a written record of exposure data on all pictures) it will be possible to determine the exact exposure which gives best results with your equipment. This then, will be a basis on which exposure can be figured for other distances and stop openings. Supposing f8 gave the best picture . . . at 10 feet. Multi-

plying these two numbers gives a guide number of 10×8 , or 80. This provides your own *flash number* for use as long as the same equipment and conditions are used.

At any distance, shutter speed and equipment remaining the same, it is only necessary to divide your flash number 80 by the distance from the lamp to subject to get the right diaphragm opening. At 20 feet, for example 80 divided by 20 gives 4. Use $f/4$. At 5 feet, 80 divided by 5 gives 16. Use $f/16$.

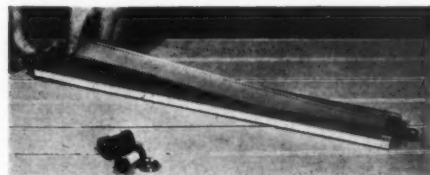
These three exposures will greatly improve your color technique. How to take the remaining exposures in your color test roll of film will be described in a future issue of MINICAM.

FILM SPEED RATINGS (CORRECTION)

Films were listed as to speed in the article, "How To Use Flash Number Tables," April MINICAM, page 51. The group, "FAST FILMS (Weston Tungsten rating 32)" should be headed "Film B."

Latensification Aid

Latensification is a method of increasing the speed of a film from two to four times by fogging it by an exposure of several minutes to the light from a panchromatic dark green safe-light (Wratten Series 3) 5 to 10 feet distant. Maximum latent image intensification occurs when the film is fogged for from 25 to 40 minutes.



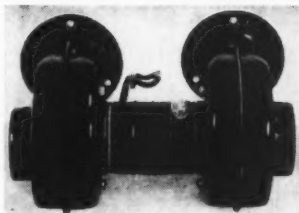
When latensifying 35mm. or roll film, use a narrow board the exact length of the film, with a large spring paper-clip at each end to hold the film tight and flat during the fogging exposure.

The board illustrated is 20" long and takes ten exposures of 35mm. film plus necessary leader and tail. Coat the board with matte black paint. If several different lengths of film are used, make a board for each length.

For more details on the latensification method see MINICAM PHOTOGRAPHY, December, 1940, page 121.—Everett Rudloff, Elberon, N. J.

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City	Street Address	Dates Open	Name of Exhibition
Appleton, Wis.	Lawrence College	May 1 to 15.	California Group (from The Museum of Modern Art).
Jersey City, N. J.	Lobby of the Jersey City Y. M. C. A., 654 Bergen Ave.	May 20 to 26. 9:30 a. m. to 10:30 p. m.	First National Salon of the Jersey City Y.M.C.A. Camera Club.
Los Angeles, Calif.	Galleries of the L. A. Camera Club, 2504 West Seventh St.	May 18 to June 1; 10 a. m. to 10 p. m.	All-American Salon of Pictorial Photography.
Milwaukee, Wis.	772 N. Jefferson St.	May 1 to 12; 9:30 a. m. to 5 p. m. daily except Monday, 1:30 to 5 p. m. Sunday.	Eighth International Milwaukee Salon of Photographic Art, 25c on Tuesdays only.
Montclair, N. J.	Montclair Art Museum.	May 25 to June 22; 10 a. m. to 5 p. m. weekdays, 2 to 6 p. m. Sundays and holidays.	New Jersey National Salon of Photography, Orange Camera Club.
New York City	Room 3, Mezzanine of the RCA Building.	May 11 to 21; 10 a. m. to 9 p. m.	Third Annual Salon, Rockefeller Center Camera Club.
Paducah, Ky.	Carnegie Public Library.	May 19 to 23; 10 a. m. to 9 p. m.	Paducah International Salon of Photography.
Philadelphia, Pa.	Zoological Garden.	May 4 to 11; 9 a. m. to 6 p. m.	Fourth Annual Photographic Contest and Exhibition.
Racine, Wis.	Charles A. Wustum Museum of Fine Arts.	May 3 to 25; 9 a. m. to 5 p. m. weekdays, 3 to 5 p. m. Sunday.	Third Annual Salon of Photography, Racine Camera Club.
St. Joseph Mich.	Whitcomb Hotel Lounge.	May 4 to 15.	Seventh Annual Blossom Festival of Photography.
Scranton, Pa.	Everhart Museum.	May 10 to June 7; 10 a. m. to 5 p. m. weekdays except Mondays, 2 to 5 p. m. Sundays and holidays.	1941 Anthracite Photographic Salon.
Sioux Falls, S. D.	Y.M.C.A., 230 S. Minnesota Ave.	May 25 to 31; 8 a. m. to 12 p. m.	Sioux Falls Second Annual Salon of Photography by The Pictorial Photographers of the North Central States.
Springfield, Mo.	Springfield Art Museum.	May 15 to 31; 2 to 5 p. m.	The First Annual Ozark Salon of Photography.
Springfield, Ohio	129 N. Limestone.	May 21 to 31; 9 a. m. to 10 p. m.	Fourth May Salon of Photography of the Springfield Camera Club.
Tacoma, Wash.	119 11th St.	May 14 to 18; 10 a. m. to 9 p. m.	Iacoma Camera Club 1941 Photographic Salon.
Toledo, O.	Toledo Museum of Art.	May 4 to June 1; 11 a. m. to 5 p. m. weekdays, 1 to 5 p. m. Sundays.	Second Toledo International Salon of Photography.
Watertown N. Y.	The Flower Memorial Library, Washington St.	May 19 to 31; 9 a. m. to 9 p. m. weekdays only.	Third Annual Northern New York Photographic Salon.


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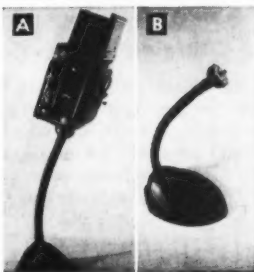
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GADGETS, KINKS AND SHORT CUTS

(Continued from page 69)

Lamp-Stand Camera Support

To convert a gooseneck desk lamp into a solid camera support for use on flat surfaces, remove the cord, reflector, socket base and socket body. Plug the hole in the top of the gooseneck with cloth and pour molten solder or lead into the socket cap until it is level with the top. Insert a $\frac{1}{4}$ " machine bolt, 20 thread, head down in the hot metal and hold it in position until the metal cools.



Soldering paste need not be used, and capillary depression causes the solder to be recessed slightly at the bolt and the outside of the socket cap, resulting in a more finished appearance.

The paper insulator which was removed from the socket cap may be slipped over the bolt to protect the camera finish around the tripod hole. For added steadiness, the base of the lamp may also be weighted with lead or solder. — Glenn Stangland, Flandreau, South Dakota.

Lubricate Focusing Mechanisms

A light application of powdered graphite from a tube obtainable at hardware stores for 15 cents, will lubricate a stiff helical focusing mechanism.

Spray a thin film of graphite on the threaded barrel and then work the focusing lever several times to spread the lubricant. Be careful not to apply too much. — Howard Brisco, Bristow, Oklahoma.



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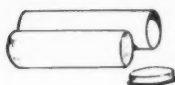
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Lens Extension Tubes



The nickel-plated thin brass tubes in which sticks of shaving soap are packed can be quickly converted into lens extension tubes, for experimenting with lenses of longer focal length than the camera extension or bellows will accommodate.

When soldering flanges on these tubes, be sure to file off the nickel plating and tin well first. A coat of flat black paint on the inside eliminates reflections.—R. L. McCollm, Interlaken, N. J.

Drain Pipe Developing Tank

A length of terra cotta drain pipe stopped up at one end with cement makes an inexpensive developing tank. The size of the drain pipe selected depends on the amount of developing solution you wish to make up, the size of the film to be developed, etc.



After having selected the desired size, place it flange end up and cut a circle of cardboard or plywood to fit into that end. Paint both sides of this circle with black asphaltum paint and allow it to dry.

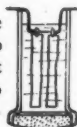
When the asphaltum paint is dry, insert the circle into the flange end of the drain pipe and make up the following mixture:

Builder's cement 1 part
Fine sand 3 parts

Add enough water to make a stiff cement; mix thoroughly and pour on top of the circle, until the cement is level with the top of the flange.

When the cement has hardened, apply more asphaltum paint to the inside of the pipe and circle where they join. When this is dry, the tank is ready for use. Square terra cotta pipe is also obtainable from dealers in building materials, and makes a more convenient shape of tank.

Simple hangers for roll film can be made from coat-hanger wire bent to shape as in drawing at right. Paint these with the asphaltum paint to prevent rust and corrosion from developer chemicals.



To preserve the developer from excessive oxidation when the tank is not in use, make a loose-fitting wooden plug, as shown in this drawing, drive a nail part way in for a handle, and give it two or three coats of asphaltum paint. Drop this on top of the developer and it will float on the surface, sealing the solution from harmful action of the air.—R. L. McCollm, Interlaken, N. J.



Rubber Band Holds Prints on Trimmer

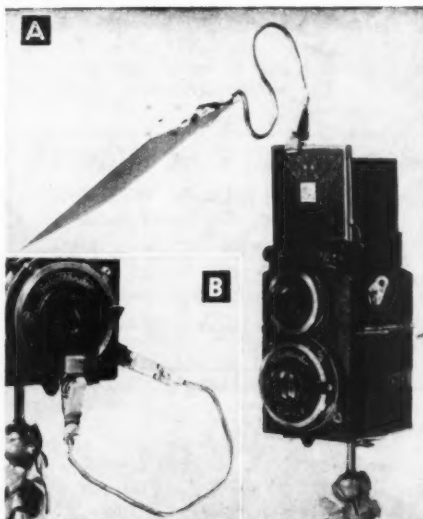
A large, heavy rubber band placed around a trimming board close to the blade holds prints tight against the smooth board for accurate trimming.



This is of considerable help when trimming double-weight prints that have curled. It also makes it easier to hold single-weight prints in position without any slipping.—*William Swallow, Brooklyn, N. Y.*

Third "Hand" for Photographers

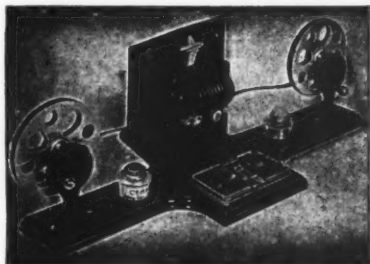
Two small battery clips fastened to the ends of a 6-inch piece of heavy solder wire perform almost every function of that much-to-be-wished-for human accessory, a "third hand" for photographers.



Besides holding all sorts of lens attachments, masks, notes, focusing lens, etc. (as in B above), it holds diffusion screens, shields, reflectors (as shown in A), loose wires, etc.

In the dark-room it will keep the thermometer from rattling around in the developer tray, help in dodging enlargements, hang films up to dry, and in many other small jobs.

File the teeth off the jaws of the two clips and slip a small piece of rubber tubing over them to protect the camera or furniture to which they may be fastened. The wire bends very easily and stays in any position if the piece is not too long or the weight too heavy.—*Ed. Winkels, Winona, Minn.*



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Whittle the stick down if necessary, so that it fits tightly into the hole with the rubber cup against the end of the tripod leg.

When used on smooth floors, the suction cups adjust themselves to the angle of the floor and at first slide an inch or two before taking a firm grip. When they finally get set, however, they are anchored for good until the job is finished.—Ed. Winkels, Winona, Minn.

NEXT MONTH IN MINICAM

"HOW TO FILM A WEDDING"

Taking Still and Cine Pictures

"HIGH KEY QUESTIONS AND ANSWERS"

By JOHN HUTCHINS

This article will appear in the next (June) issue of MINICAM.



"He's looking for the developing tank corps!"

CAMERA CLUB

-- NEWS AND IDEAS --

• FROM THE LIGHT and Shadow Club of San Jose, Calif., which publishes a paper called "Synchronized Flashes," comes a clever idea. Whenever club members get new cameras, equipment, or accessories, etc., they publish this news under the heading "Blessed Events," under

this illustration of a stork flying along with a traditional "bundle from heaven."

• CAMERA CLUB LETTERHEADS are apparently beginning to receive the attention of skilled designers and artists, if the evidence reaching this desk is typical. The Danville (Ill.) Camera Club has a printed letterhead with a square space ruled off in the upper left-hand corner. In this square is pasted a small glossy print, of a shutter and lens with the club's name in white lettering on the lens. (See picture at right.)

The use of photographic prints of some special insignia, or design, on the club letterhead is an *inexpensive* way of adding decoration—especially for clubs that require only a limited amount of stationery. Making small contact prints of the chosen design can even be a club project, with everybody pitching in to help. Of course, if your club secretary sends out letters by the hundreds, that's *another* problem.

• FROM OIL CITY, PA., where the Venango Camera Club is doing a fine job, comes a drawing of shutter and lens as shown at the left. This is printed in the center of this club's letterhead. Note the variation in this design, although it has same basic subject matter as the Danville Club used.

The lens, in this drawing, mirrors the oil wells found in the vicinity of Oil City. The camera club's name replaces the shutter name-plate. And below, instead of stop markings, is the name of the city.

Why not have a club competition to uncover the artistic talent in your own club and turn it to the design of a distinctive illustration for your letterhead? If there are no skilled draftsmen in the club, make the design competition

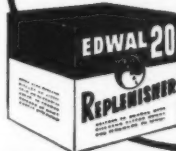


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exclusively photographic. There must be a hundred symbols for photography that can be used for club letterheads.

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• **THE SUCCESS OF** The Esquire Camera Club in Detroit, will encourage amateur photographers who work at night to organize groups in other cities to meet during the day. The Esquire Club meets in a Detroit Y.M.C.A. club room at 1:00 P. M. on Mondays. Larger clubs might find it worthwhile to organize a special section for members who work at night, and present their programs twice on meeting days. Once in the afternoon and a second time at the regular meeting hour in the evening.

• **THE EASTERN PHOTOGRAPHIC** Institute, 663 Beacon St., Boston, Mass., accepts traveling exhibits for comment by its staff, students, and Herbert Franklin Lang, Director of the Institute. Send inquiries for further information to Earl D. Rodgeron, Consultant, at the above address.

NEW CLUBS

Central Jersey Camera Club, Yardville, N. J.
The Heart of the Ozarks Camera Club, 305 E. McDaniel St., Springfield, Mo.

East Hamilton Camera Club of Hamilton, Winter Gardens, Ottawa Sta., Hamilton, Ontario, Canada.

Antigo Amateur Camera Club, 716 Deleglise St., Antigo, Wis.

Twenty-Five Pictorialists, Hotel Roosevelt, St. Louis, Mo.

Camera Club of Johnsonburg, Johnsonburg, Pa.

Camera Club of El Dorado, El Dorado, Ark.

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Rochester Photographic Society, Gordon Fyfe, 81 Rye Rd., Rochester, N. Y.

Kittanning Camera Club, James Hough, 1348 Orr Ave., Kittanning, Pa.

Camera Club of El Dorado, R. L. Duggar, El Dorado, Kans.

Middlesex Camera Club, Caton Bradley, P. O. Box 13, Middletown, Conn.

EXHIBIT EXCHANGE

Indianapolis "Y" Camera Club, 310 N. Illinois St., Indianapolis, Ind.

Central Jersey Camera Club, James T. Bresnen, 754 Edgewood Ave., Trenton, N. J.

Kankakee Photo Club, H. Glenn Schneider, Secy., 496 S. Nelson Ave., Kankakee, Ill.

The Heart of the Ozarks Camera Club, John McGuire, 305 E. McDaniel St., Springfield, Mo.

Rora Photo Club, Mabel M. Murray, 731 N. 79th St., Seattle, Wash.

Rainy Days In Town

By C. W. GIBBS, A. R. P. S.

ON RAINY days most photographers give their cameras a vacation, yet those who have made pictures on rainy days know that some fine pictures can be made in the rain. You can find so many interesting subjects if you care to look for them and your camera will not suffer any if you just take a little care with it. It is rather difficult though to hold an umbrella and run a cine camera at the same time, but even if you don't have an assistant with you there are always doorways to take advantage of, or you can shoot from a window.



On rainy days, we prefer the use of an ortho film because of its slightly higher contrast. The lighting is flat on rainy days so it is necessary to pep up the contrast a little. If you are using panchromatic, a filter will help to obtain greater contrast. Use your exposure meter and then underexpose a trifle as underexposure increases the contrast. Use a lenshood to keep the rain off the lens and except when you are actually shooting, keep the lens cap on. One drop of rain on the lens and your picture is spoiled.

For subject matter you have a great variety from which to make a selection,—so shoot everything. People holding their umbrellas against the wind and rain, close-ups of raindrops splashing in little puddles, people hurrying along to get out of the rain and raindrops running down the window pane. Then after the rain you can make some shots of buildings reflected in the puddles. Don't forget when doing this to set the lens, not for the distance to the puddle, but the combined distance from camera to reflection to subject.



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Views along the streets made on a rainy day often come out better than if they were made in sunlight. The rain, or the haze, increases the effect of perspective, making distant objects very indistinct in a pleasing way. Because of this shrouding of the distance by the mist and rain don't try to use telephotos because you will find that even with a red filter it is difficult to get snappy pictures of distant objects.

You can use a few rainy day shots in a reel made on brighter days as a contrast. Or, to make up an entire reel of rainy day pictures, all you need is a simple introduction and conclusion sandwiched around miscellaneous scenes. For an introduction, paint the title on a window pane with watercolor. Raindrops falling on the pane behind the lettering makes it quite effective. The opening scene would be a closeup of raindrops splashing in a puddle. Then a semi-closeup of feet splashing over wet pavement. Following this, splice in all your rainy day scenes. After the rain has stopped take a shot of people walking along with furred umbrellas, and for the last scene, a distant shot of a building as you tilt or pan the camera down to a puddle in which the reflection of the building may be seen.



"Yes, this is me—taken in the country—Arthur used Farmer's Reducer on the Negative!"

NEW GLASS, DEVELOPED BY EASTMAN, REVOLUTIONIZES LENS-MAKING POSSIBILITIES

A RADICALLY new glass for lens-making, produced without the silicates heretofore composing glass and possessing increased capacity for bending light rays, has been developed by the Eastman Kodak Company and incorporated in aerial lenses designed by that company for the Government during the past year.

"Almost as revolutionary as if someone had discovered how to make steel without iron," the new optical substance is the first basic optical-glass discovery since 1886, when the famous Jena glasses were introduced in Germany.

Tantalum, tungsten, and lanthanum, all considered normally as rare metals, are used to produce the new glass.

Existence of the rare-element glass was disclosed in a summary of Eastman defense work contained in the company's annual-report booklet for stockholders, distributed recently.

The new glass puts an important new medium at the disposal of optical designers, a lens expert said.

The glass has become available in the 'golden age' of optical science, when lenses considered the best ever made have been designed in spite of the fact that no intrinsically new optical glass has been produced for more than half a century. It is fortunate that the research on the rare-element glass, with its unique characteristics, came to fruition at a time when the resulting material could be put to use in the national-defense program.

The new glass is described as possessing a much higher refractive index than previously available optical glasses. In common terms, its light-bending ability is much greater.

This means that a lens of a given focal length will have much less curvature and that the path of rays through the margin of the lens will be more nearly like that of the rays passing through the central part of the lens.

The consequence, as shown by service tests of aerial lenses in which the new glass has been incorporated, is better "definition" in aerial pictures and a larger area covered, yet with no loss of lens speed.

Glass heretofore used for optical systems has been made from sand, which is composed of silica, with small quantities of alkaline earths and of elements such as boron and lead added.

Use of tantalum compounds and compounds of other rare elements was suggested eight years ago by Dr. G. W. Morey of the United States Geophysical Laboratory, and the Kodak Research Laboratories soon commenced an investigation into the feasibility of the proposal. The new glass now being manufactured in the laboratories is the result of this collaboration with Dr. Morey and of prolonged subsequent experimentation.

The Eastman Kodak Company has manufactured aerial lenses for the Government since the last war.

Some time may elapse before the new glass is found in wide and general use for photo-

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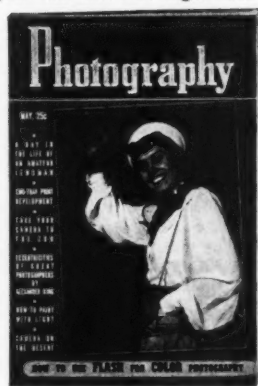
Ellsworth Ford, New York City professional photographer, shot the cover on Kodachrome Type B. Three flash lamps were used. The main light was on the right of the camera, six feet from the subject and five feet high. The secondary light was on the left, also close to the camera, four feet high and 5½ feet from the subject. A diffusing screen was used over this reflector.

These two light sources furnished even illumination, without pronounced facial shadows, as can be seen in the cover reproduction.

The third flash lamp was used on the background to obtain the desired tone of blue.

The subject is Marion Whitney, a Powers model.

For more about color photography, see the article, "Flash for Color," on page 64.



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On your own home screen—full-color “stills”—
with **KODACHROME**—at surprisingly low cost...

COLOR “STILLS”—as brilliantly gay and beautiful as the one above, when shown on your home screen—are the big thrill today among miniature-camera owners.

With a Kodak Bantam *f*/4.5 or a 35-mm. camera such as the Kodak 35, anyone can make these full-color “stills” with Kodachrome Film. They’re enormously popular. And you’ll be surprised at how little they cost. With Kodachrome, the initial cost is the whole cost—your finished transparencies, in slides which are all ready to project, are paid for when you buy your film. Ask your dealer to show you. Eastman Kodak Co., Rochester, N.Y.

*These Kodaks make full-color Kodachrome “stills”
as well as pictures in black-and-white*



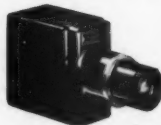
\$1450 Kodak 35 *f*/5.6

Compact, smart, convenient-to-carry. Kodak 35 *f*/4.5—\$24.50. Kodak 35 *f*/3.5—\$33.50; with Coupled Range Finder, \$47.50.



\$2250 Kodak Bantam *f*/4.5

So small it fits the palm of your hand; fast, versatile. A precision miniature.



For Projection . . .

Kodaslide Projector Model 1—small, efficient, thoroughly dependable. Complete with lens, lamp, and 11½-ft. cord—\$18.50.

KODACHROME FILM

Eastman's film for gorgeous full-color “stills”

OME

DOX

"still"

5.6

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f/4.5—
f/3.5—
Range

mf/4.3

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